FEB 4 1927

PERIODICAL ROOM
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THE AMERICAN
School Board Journal

A PERIODICAL of SCHOOL ADMINISTRATION

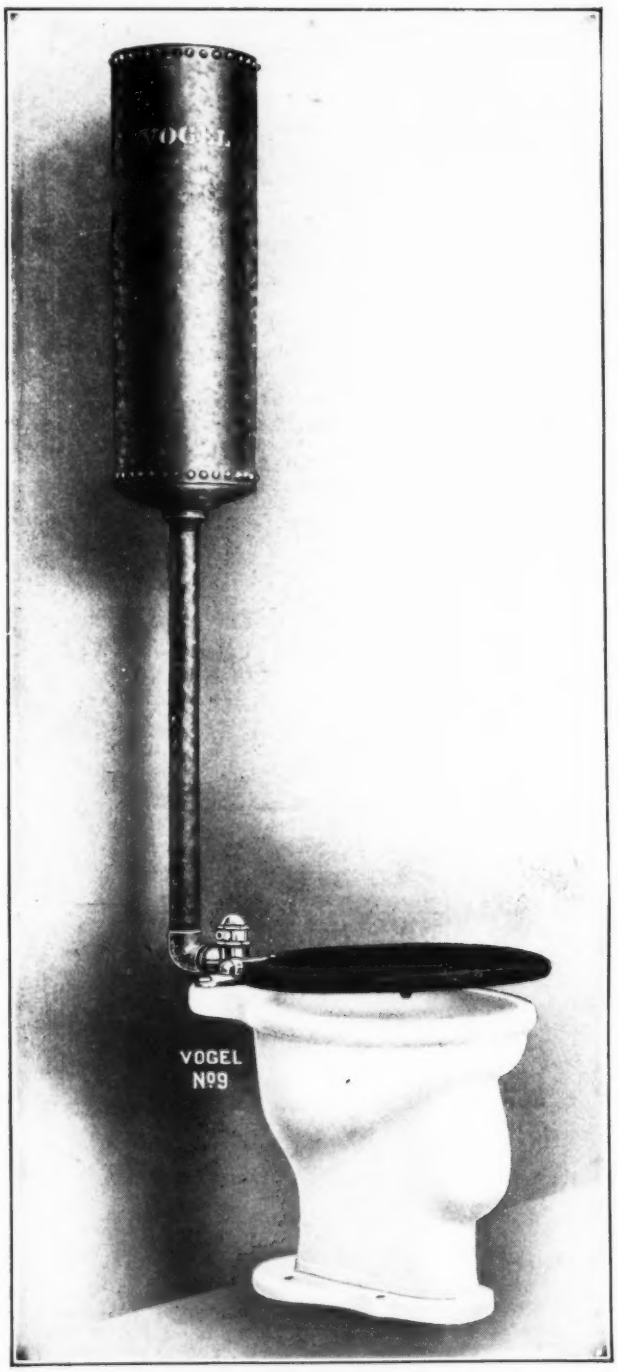
February 1927

THE BRUCE PUBLISHING COMPANY
MILWAUKEE, WISCONSIN

VOGEL

PATENTED

Number 9 Automatic School Water Closet



This closet is made to stand the rough usage of the school water closet.

Economical in the use of water.

Seldom requires repairs.

Easy of access when repairs are necessary.

The simplest and most durable automatic water closet.

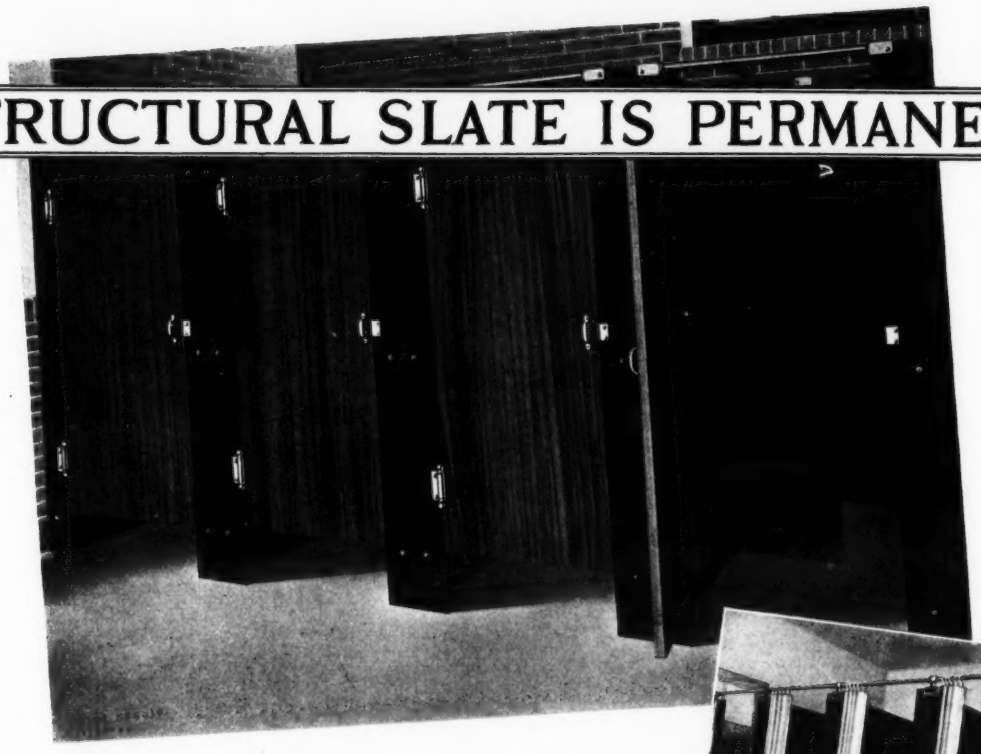
Many Thousands in use.

Sold by Wholesalers of Plumbing Supplies Everywhere

JOSEPH A. VOGEL CO.

Wilmington, Delaware **St. Louis, Missouri**

STRUCTURAL SLATE IS PERMANENT



Structural Slate is the ideal material for Toilet Enclosures, Shower Stalls, Urinal Stalls, Stairways, Caps, Bases, Wainscots, Floors, Fireplaces, Etc.

STRUCTURAL SLATE IS ECONOMICAL

Structural Slate, completely meets the exact requirements of present day School Buildings.

No matter what your color scheme may be, Structural Slate blends harmoniously.

No matter what unusually hard usages are inflicted, Structural Slate will last longer than the building.

No matter how limited the finances are, Structural Slate slashes upkeep cost "to the very bone"—in fact, obliterates it completely.

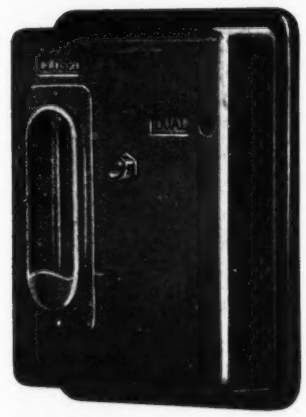
Use Slate in your Schools. It will prove its merits in years and years of service—Structural Slate will outlast generations!

THE STRUCTURAL SLATE COMPANY

108 ROBINSON AVENUE, PEN ARGYL, PA.

Holding Down Your Schools' ..Fuel Consumption 40%..

—Is Good School Board Business . . .



Johnson Dual Thermostat System Of Heat Control is not merely a modern notion, nor a device that can just as well be gotten along without.

Its night and day individual room control of heat saves as much as 40 per cent in fuel annually: without which that much fuel is unnecessarily and wastefully consumed.

Automatically controlling each school room constantly and correctly at the degree of temperature required during school hours, regardless of outdoor weather changes: Johnson Dual Thermostat System supplies a night time fuel economy as well. At the close of school for the day, operation of a wall switch turns off the heat in all of the rooms, save in the room or rooms to be used at night: for night classes, meetings, etc. Next morning the same wall switch operation turns on the heat in all of the rooms again for the day. A day and night heat control convenience and fuel economy factor of invaluable worth, AND DEFINITELY ESSENTIAL.

JOHNSON SERVICE COMPANY
MILWAUKEE
WISCONSIN
U. S. A.

JOHNSON
SYSTEM OF TEMPERATURE AND HUMIDITY CONTROL

The All Metal System . . . . JSC . . . . The Dual Thermostat System

KEWANEE

STEEL BOILERS

Building with steel and rivets insures great strength—*and durability*

Big bridges—big boats—big buildings—must be built not only strong *but durable.* That's why they are always of riveted steel construction. And this same tried and true construction is used in Kewanee Boilers.

That's why they have established such noticeable records for long life—a quality which directly affects the pocket-book of every building owner.

BY INVITATION MEMBER OF

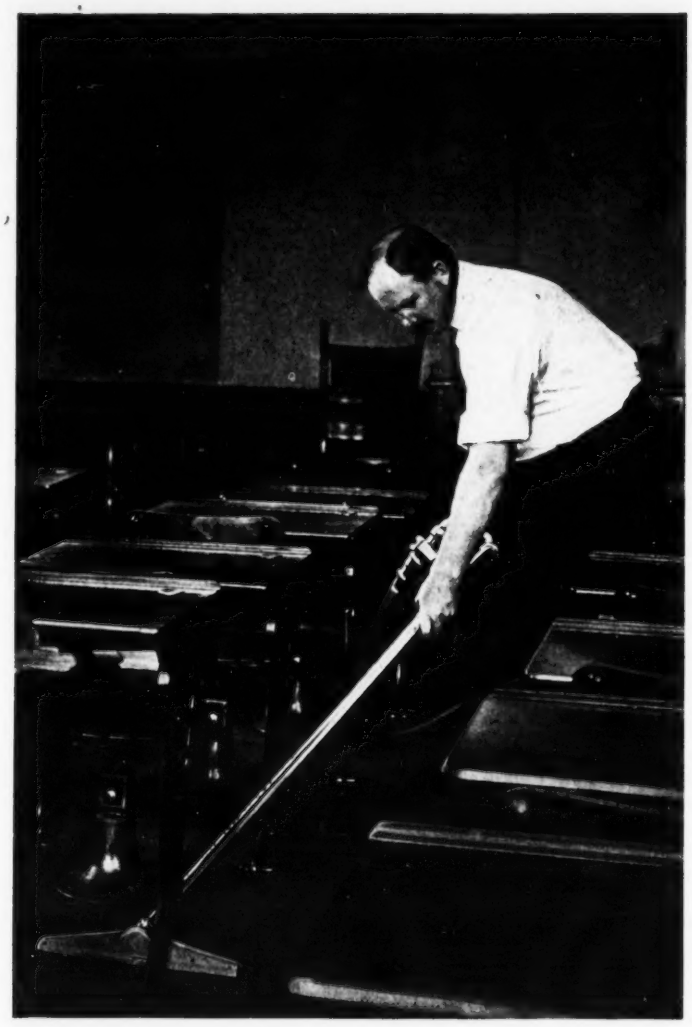
NEW YORK, U. S. A.

KEWANEE BOILER COMPANY KEWANEE, ILLINOIS

BRANCHES

Atlanta, Ga. Birmingham, Ala. Boston, Mass. Charlotte, N. C. Chattanooga, Tenn. Chicago, Ill. Cincinnati, Ohio Cleveland, Ohio Dallas, Tex. Denver, Colo. Des Moines, Iowa Detroit, Mich. El Paso, Texas Grand Rapids, Mich. Indianapolis, Ind. Kansas City, Mo. Los Angeles, Calif. Memphis, Tenn. Milwaukee, Wis. Minneapolis, Minn. New Orleans, La. Philadelphia, Pa. Pittsburgh, Pa. St. Louis, Mo. Salt Lake City, Utah San Antonio, Texas San Francisco, Calif. Seattle, Wash. Spokane, Wash. Toledo, Ohio Toronto, Ont., Can. New York City, N. Y.

STEEL HEATING BOILERS, RADIATORS, WATER HEATERS, TANKS AND WATER HEATING GARBAGE BURNERS



The swivel tool enables the operator to reach under desks and chairs and into seemingly inaccessible corners.

SPENCER
Central Cleaning Systems
Will be exhibited at the 1927 Convention of the N. E. A. Department of Superintendence.
DALLAS — Feb. 26-Mar. 3rd.
VISIT OUR EXHIBIT.

Spencer Advantages

1. Always ready for use.
2. Can be operated by anyone of ordinary intelligence.
3. Possesses an easy and perfect system of control.
4. Tools are few, simple and strong — all wearing surfaces easily, quickly and inexpensively replaced.
5. No valves, belts or complicated parts requiring constant adjustment.
6. Consumes power only, beyond the idle load, directly in proportion to the amount of work being done.
7. Has comparatively few wearing parts and consequently low maintenance cost.

The recommendations of our Engineering Department may be obtained on any cleaning problem without cost or obligation.

SPENCER
CENTRAL CLEANING SYSTEMS

Spencer Central Cleaning Systems represent the highest development in vacuum cleaning apparatus within the last decade. They include features of design, construction and operation found in no other system of vacuum cleaning.

And it is for this reason that over 1,200 Spencer Vacuum Cleaning Systems are in use in schools today—each rendering an incomparable degree of satisfactory service, which with the passing of each year, only tends to more firmly establish Spencer prestige and reliability.

School Officials, Architects and Engineers throughout the entire country unqualifiedly indorse and recommend the Spencer System as the ideal vacuum cleaning equipment for school installation.

Write for list of school installations and complete data regarding Spencer equipment.

The Spencer Turbine Company
Hartford **Connecticut**

175,000 Square Feet of Boiler Capacity

One of the largest low pressure steam heating plants, if not the largest, in the country.

The Baltimore warehouse of Montgomery Ward & Co. is heated by seven Pacific Boilers, with a total rating of 175,000 square feet cast iron radiation.

The original installation of four Pacific Boilers was provided for the first unit of the building, erected in 1925. In 1926 three more boilers were added, to heat the new wing. Six of the seven boilers are fired from the rear with straight-shot oil burners. The seventh is used for burning waste paper, crates, and other refuse.

This remarkable installation is another striking example of Pacific leadership in the heating field. This leadership now extends to every type of building and to every variety of climate. It is founded on high efficiency and proved dependability under all operating conditions.

Write for catalog, stating type of buildings in which you are especially interested.

Installation of 7 Pacific Boilers, Baltimore Warehouse, Montgomery Ward & Company; Engr. of Construction, W. H. McCauley; Heating Contractors, Distler & Company, Inc.; Wing Addition, H. E. Crook, Inc.

Lower illustration: rear view, showing oil burning equipment.

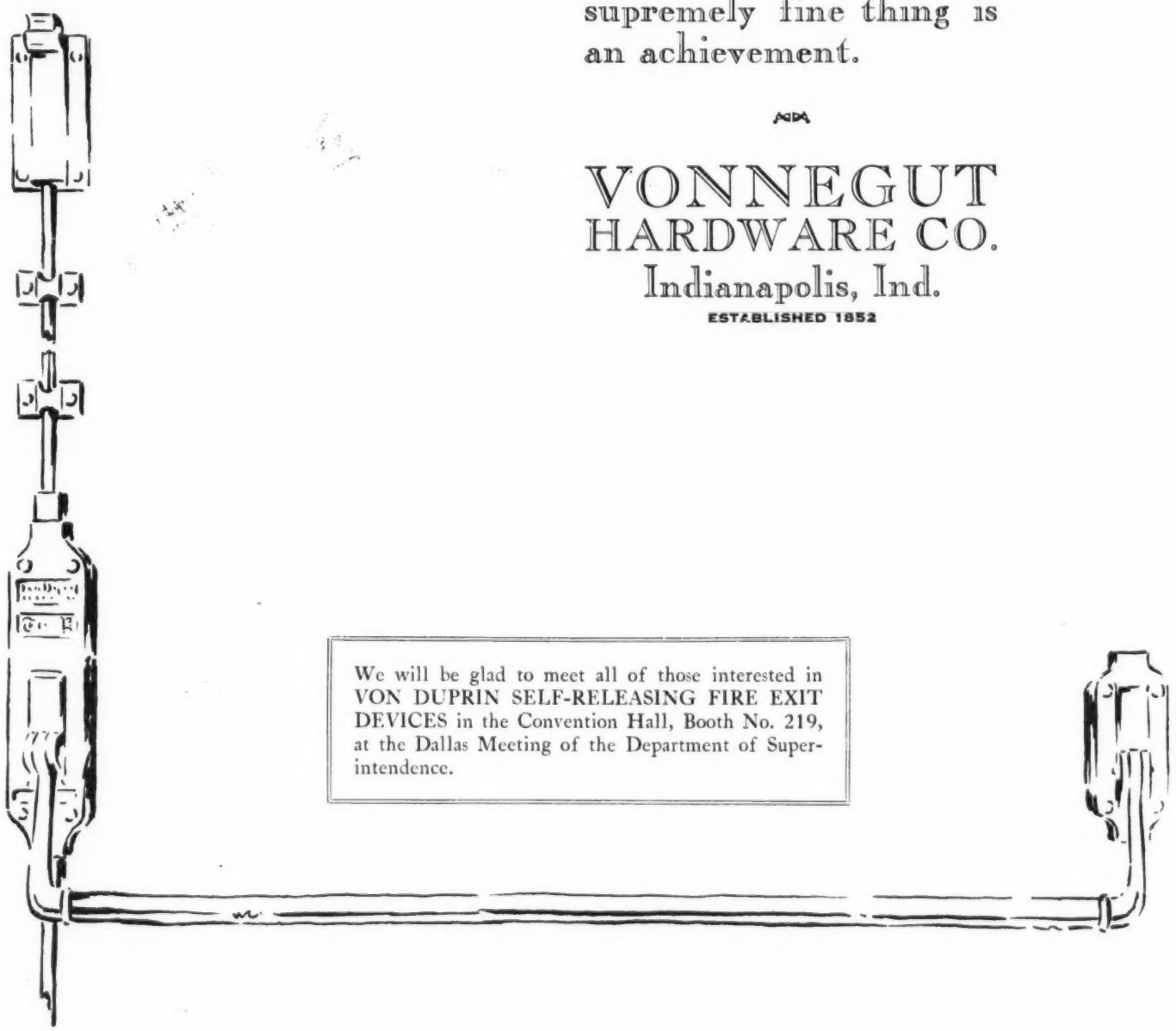
STEEL HEATING BOILERS · PACIFIC · WAUKEGAN, ILL. BRISTOL, PA. · TRADE MARK REG. U.S. PAT. OFF.

PACIFIC STEEL BOILERS CORP. OF ILL., *Waukegan, Ill.*
PACIFIC STEEL BOILERS CORP., *Bristol, Pa.*
Sales Offices in 50 Principal Cities

PACIFIC
STEEL HEATING BOILERS

Von Duprin

Self-Releasing Fire Exit Latches

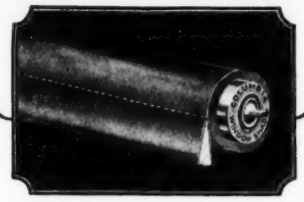


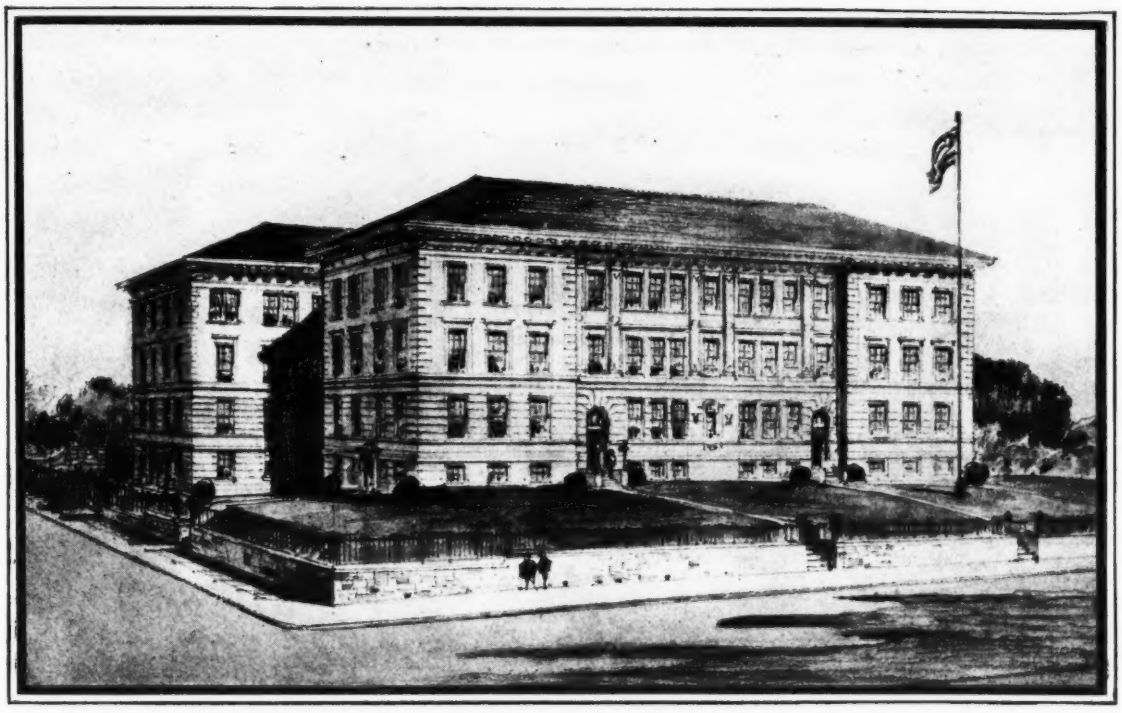
Many can manufacture cheaply – but to make a supremely fine thing is an achievement.

ADA

VONNEGUT
HARDWARE CO.
Indianapolis, Ind.
ESTABLISHED 1852

We will be glad to meet all of those interested in VON DUPRIN SELF-RELEASING FIRE EXIT DEVICES in the Convention Hall, Booth No. 219, at the Dallas Meeting of the Department of Superintendence.





The new Columbus School, New Rochelle, N. Y., is completely shaded with Columbia Crescent Tint on Columbia Metal Rollers. Starrett & Van Vleck are the Architects

Speaking of economy~

"Robertson, the thing that gets me is the way the little things eat up the maintenance budget," complained one school superintendent to another at a recent convention.

"Take the item of window shades, for example. Last year alone we spent a couple of hundred dollars replacing worn out shades and fixing up the others. Window shades are just an awful nuisance!"

"Well, Evans, I check with you when you say that the little things eat up the budget," replied Robertson, "but when you single out window shades, I dissent. Why, I'll wager that our window shade upkeep hasn't averaged a dollar for every one hundred dollars of original equipment for the last four years."

"Say," laughed Evans, "do you think I was born last Tuesday? What are your shades made of—rubber?"

"Rubber, nothing," retorted Robertson, a little warmly. "Four years ago we had our school completely shaded with *Columbia* Window Shades and Rollers—and, boy! I want to tell you they have worn like iron. Never tear or crack and you can't stretch 'em. Moreover, their colors are absolutely uniform."

"Colors?"

"*Sure!* These *Columbia* Shades are painted in soft tone-colors which are ideal for schools. They are regular *daylight filters*. Let in plenty of light, you know, but none of that glare that makes everybody fidgety and irritable."

Evans smiled. "That's fine," he said, "but I'll bet you paid a neat little price for these tone-color shades you're so sold on."

"Wrong again," chuckled Robertson. "For all their fine points *Columbia* Window Shades and Rollers cost no more than those old-fashioned gloom-spreaders you're using."

The *Columbia* Mills, Inc.

225 Fifth Avenue, New York

Baltimore Boston Chicago Cincinnati Cleveland Detroit Pittsburgh
Kansas City Fresno New Orleans Philadelphia Portland (Ore.)
St. Louis San Francisco Minneapolis Los Angeles

To save you time

Insure shade satisfaction by using the "Standard Specification for Window Shades," which we'll send on request. This covers every point which should be included in your specification. A specimen roller and samples of Columbia Cloth are sent with specification. Mail coupon to The Columbia Mills, Inc., 225 Fifth Ave., New York.

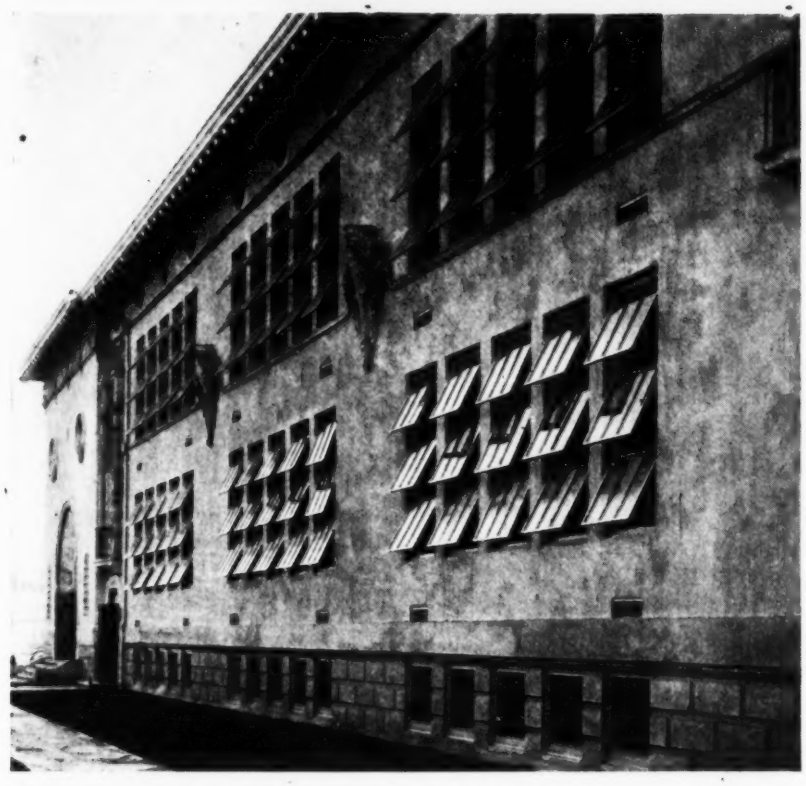
Name .....

Address S-2-27

Columbia

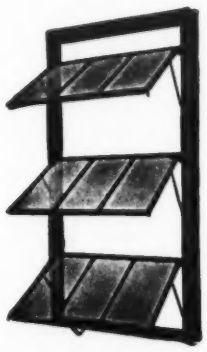
GUARANTEED

WINDOW SHADES *and* ROLLERS



St. Mary's Parochial School, Phoenix, Ariz. Archt.: Lescher & Mahoney. Contr.: A. F. Waselewski Co. Truscon Donovan Awning Type Windows. Architectural Projected and Circle-Head Windows. Industrial Projected Windows in Basement.

Ventilation without Draught—Daylight without Glare



In many of the latest school buildings Truscon Donovan Awning Type Windows were installed and have met with immediate and enthusiastic approval. They insure a healthful abundance of fresh air and the maximum amount of daylight. They are easily operated—move the bottom sash and the upper sashes are opened or closed simultaneously. Or, by releasing a catch, the bottom sash operates independently, leaving the upper sashes in any desired position. No poles are needed—no straining or sticking.

The Truscon Awning Type Window was developed primarily for use in American school buildings in accordance with the method of ventilation recommended by the New York Commission on Ventilation, headed by Dr. C. E. A. Winslow of the Yale School of Medicine. The general approval which greeted the introduction of Truscon Awning Type Windows shows that this is the ideal window for schools.

Our representative at the N.E.A. convention will be glad to show you the many unique features of the TRUSCON DONOVAN AWNING TYPE WINDOW.

BOOTH 111

February 26
March 3

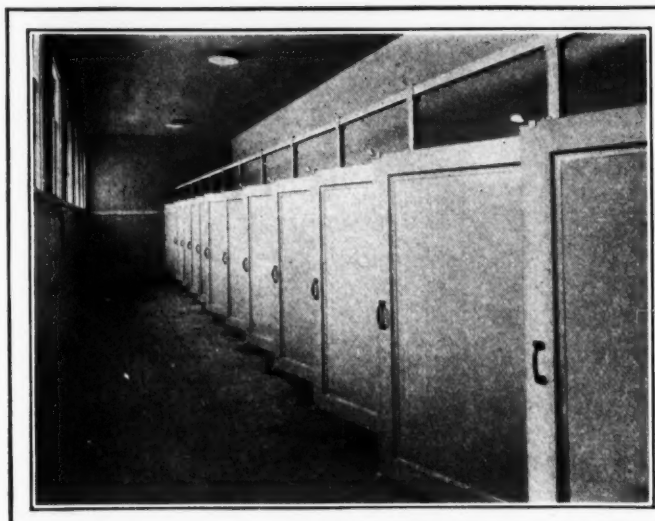
Catalog on Request.

TRUSCON STEEL COMPANY
YOUNGSTOWN, OHIO

Warehouses and Offices in all Principal Cities.

TRUSCON
DONOVAN
AWNING TYPE WINDOWS

WEISTEEL



They Stand Hard Use

Toilet, shower and dressing room compartments in public schools get hard wear and tear. Because they are built strong for school use, Weisteel Compartments have been specified by architects and builders for over fifteen years.

16 gauge, Keystone copper-bearing furniture steel, that is rust-resisting, is used in all Weisteel Compartments. The finish is lasting and sanitary, easily cleaned and kept clean. Weisteel special designed Lawson Universal Hinges are a feature of added strength and convenience.

The Weisteel Engineering Department will be glad to cooperate with architects serving school boards by designing installations for particular needs. There is, of course, no charge for this extra service.

For full details of Weisteel equipment and service, simply write us. If you send a simple layout of your space, we will gladly furnish full recommendations and quotations without obligation.

WEISTEEL
TRADE MARK REGISTERED
COMPARTMENTS

Toilet and Shower Compartments Dressing Room Partitions Hospital Cubicles

HENRY WEIS MANUFACTURING CO.
ATCHISON, KANSAS

Branch Offices:
NEW YORK CHICAGO
LOS ANGELES BOSTON
ATLANTA

Representatives in All Principal Cities

UNIVENT and Glass – *make the difference*

Univent Equipped Somerset High School, Somerset, Penna. Cambria Plumbing & Heating Co., Heating Contractors, Johnstown, Penna. E. H. Walker, Architect, Somerset, Penna.

UNIVENT (TRADE MARK)

VENTILATION

School Officials are cordially invited to attend our exhibit at the Dallas Convention, Feb. 26-March 2.

OUTSIDE—a sweeping spray of snow—a biting wind . . . . . .

But in the classroom—an automatically controlled, comfortable temperature—a dust-free, chill-free, draft-free stimulating atmosphere.

Just as the window glass lets in light but guards against the elements and keeps out dust and noise, the Univent protects precious lives with a constant supply of invigorating outdoor air—robbed of its chill and warmed to the exact temperature desired.

Regardless of extremes of weather, the Univent brings fresh outdoor air into the schoolroom, tempers it, and delivers it to each pupil without draft.

Write for the book of facts on Univent Ventilation. It shows clearly why it is simpler and more economical than opening windows, and incomparably more effective.

Mfd. only by THE HERMAN NELSON CORPORATION, *Moline, Ill.*

Builders of Successful Heating and Ventilating Equipment for 20 Years

Sales and Service

BELFAST, ME.	NEW YORK CITY	PITTSBURGH	COLUMBUS	DES MOINES	SAN FRANCISCO	DENVER	SEATTLE
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	SCRANTON	CLEVELAND	CHICAGO	ST. LOUIS	KANSAS CITY	PORTLAND	

Fence This Spring!

Safeguard the Children's Outdoor Activities

Soon warmer weather will stimulate greater use of school playgrounds. Automobile traffic also will increase. Then, more than ever, Cyclone Fence will be needed to make playgrounds safe.

Cyclone Fence prevents children from running into busy streets. Compels them to use safe entrances and exits. Reduces upkeep expense of grounds and buildings.

The Cyclone organization offers a product and service based on years of experience in fencing school grounds. The dominant position of Cyclone Fence has been established through thousands of successful installations for schools in both large and small communities. School boards everywhere standardize on Cyclone.

Phone, wire or write for complete information.

Cyclone Fence Company

Main Offices, Waukegan, Ill.

WORKS AND OFFICES: North Chicago, Ill., Cleveland, Ohio, Newark, N. J., Fort Worth, Texas.

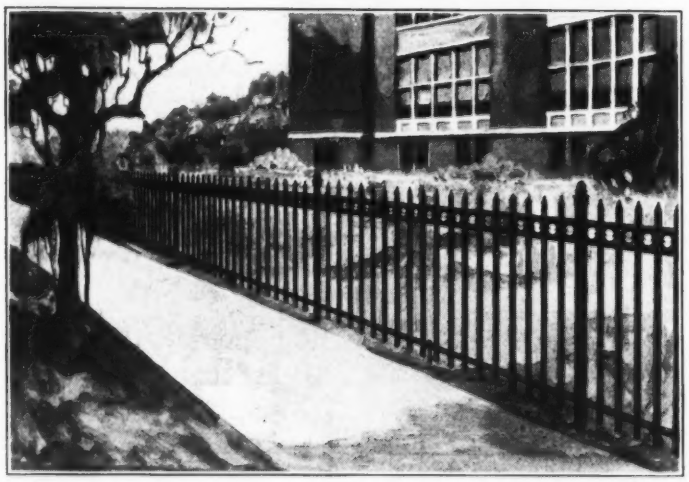
Pacific Coast Distributors: Standard Fence Co., Oakland, Calif. Northwest Fence & Wire Works, Portland, Ore.

Branch Offices in All Principal Cities.

Cyclone "Red Tag" Fence and Products

The Mark of Dependable Property Protection

Cyclone Fence Reg. U. S. Pat. Off.

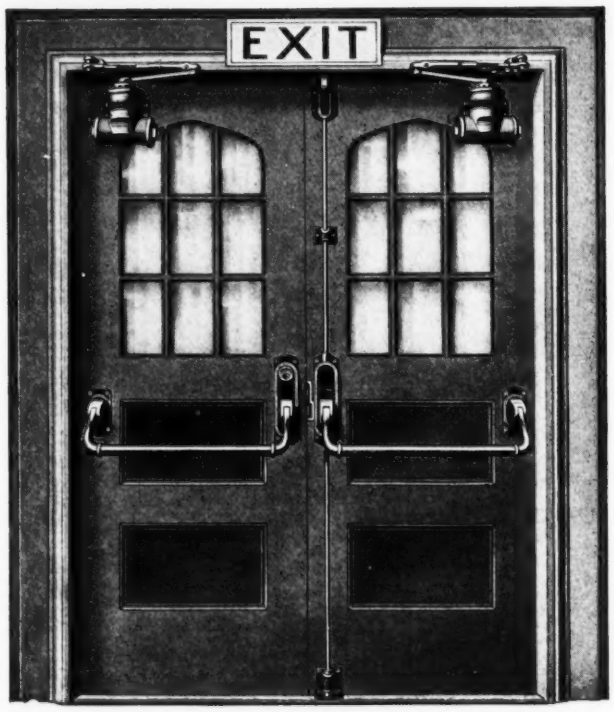


Cyclone Wrought Iron Fence, built in standard and special designs for school property.

CYCLONE COMPLETE RESPONSIBILITY MEANS QUALITY FENCE AND SERVICE

© C. F. Co. 1927

Safety in Schools



School officials, who are responsible for the protection of the lives of the pupils and are anxious to make proper provision for quick exit in case of fire or panic, will find in

SARGENT

Fire Exit Door Bolts

an adequate equipment which meets all conditions. The Sargent Cylinder Locks with which they are fitted provide for complete security and prevent entrance from the outside of the building when school is not in session, while they can be arranged to permit entrance during school hours, if desired.

Quick Exit at All Times

is provided and in case of necessity the doors can be instantly opened by slight pressure on the handle bars at any point.

Door Checks

close the doors, during their day by day use, quickly and quietly, the application shown in the illustration with the Sargent special foot (No. 35) being particularly desirable.

Sargent Fire Exit Door Bolts, Locks and Hardware are sold by representative dealers in all cities.

SARGENT & COMPANY

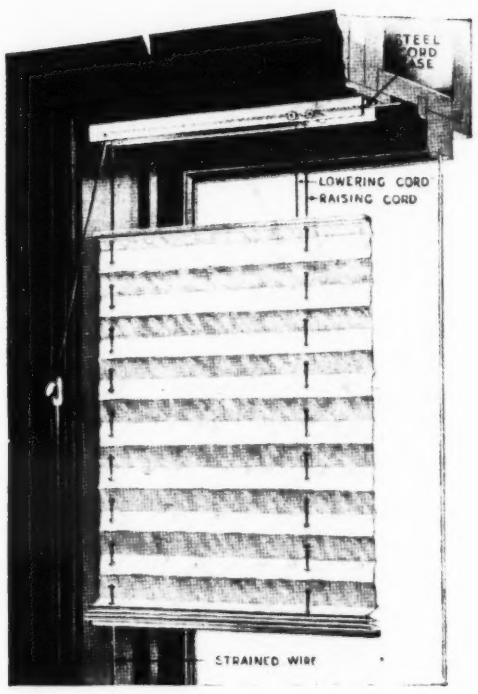
Manufacturers

New Haven, Conn.

New York **Chicago**

Athey Perennial Window Shades

Reduce Replacement Costs to a Minimum



While most window shades must be replaced every few years Athey Shades are good for many years. Many of the first ones manufactured — ***more than 10 years ago*** — are still on the job and in good condition. Thousands of installations in the finest schools, banks, office buildings, etc., prove that they last so many years they actually are **the lowest priced shades obtainable.**

The cloth used is a high grade of coutil, herringbone weave, 200 threads to the square inch, mercerized and calendered to a smooth finish that resists dirt. It is as near indestructible as cloth can be made and is dyed in seven ***nonfading colors.***

The shades run on strained wires, so they cannot flap out of open windows and tear. And they have no latches, catches or springs to slip, stick or break.

Lowest Final Cost --- plus these other advantages make Athey Shades best for School Buildings

They let in the light, yet shut out the glare. Athey Shades can be raised from the bottom, or lowered from the top (folding like an accordion). It takes only a moment to adjust them to shut out the sun's direct rays, **without shutting the light from the entire room.** The cloth of which they are made diffuses a soft light—another important feature.

By raising them to the top and lowering to about 10 inches from the window stool, an air chamber is created between the glass and the shades. If the upper window sash is then lowered about 10 inches the sun's rays, superheating the air in this chamber, will automatically draw the old air from the room and out above the sash.

This provides splendid ventilation—a very important feature in schools not provided with automatic ventilating equipment.

Write for complete information.

Athey Products — SEE OUR CATALOGUE IN SWEETS

Perennial Window Shades Disappearing Partitions
Skylight Shades Cloth-Lined Metal Weatherstrips

Athey Company
6023 West 65th St.
Chicago, Illinois

New York City: F. H. KEESE, 7 East 42nd St.
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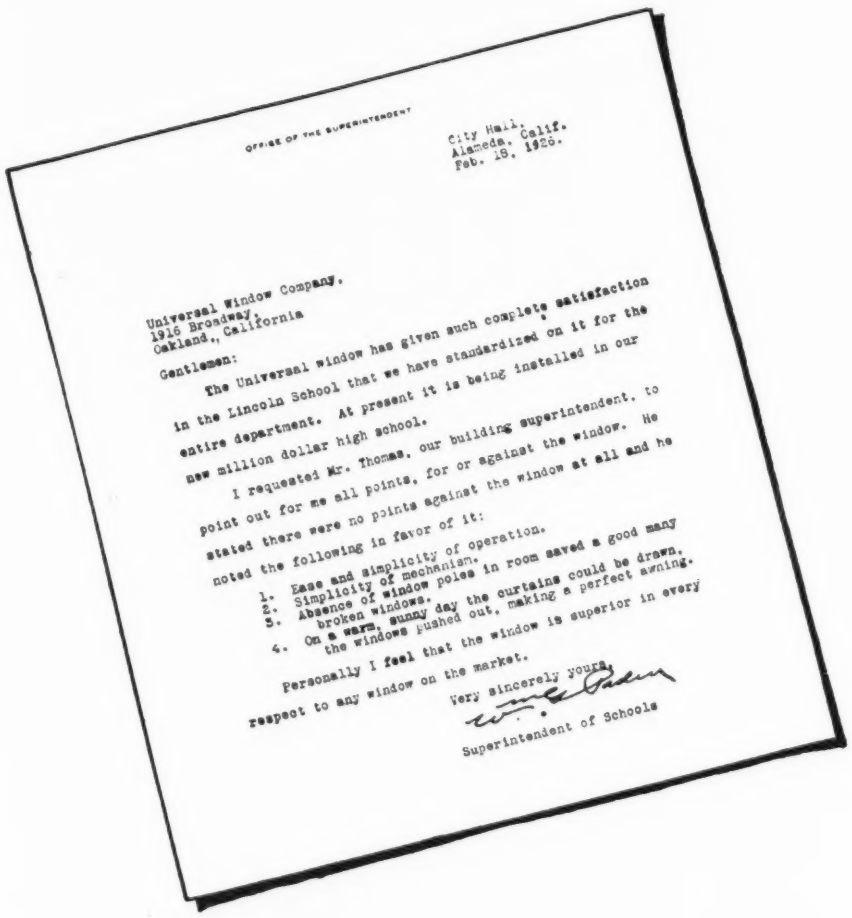
ALAMEDA HIGH SCHOOL, ALAMEDA, CALIFORNIA
Carl Werner, Architect, San Francisco, California



OFFICE OF THE SUPERINTENDENT

City Hall,
Alameda, Calif.
Feb. 19, 1926.

Universal Window Company,
1916 Broadway,
Oakland, California

Gentlemen:

The Universal window has given such complete satisfaction in the Lincoln School that we have standardized on it for the entire department. At present it is being installed in our new million dollar high school.

I requested Mr. Thomas, our building superintendent, to point out for me all points, for or against the window. He stated there were no points against the window at all and he noted the following in favor of it:

1. Ease and simplicity of operation.
2. Simplicity of mechanism.
3. Absence of window poles in room saved a good many broken windows.
4. On a warm, sunny day the curtains could be drawn, the windows pushed out, making a perfect awning.

Personally I feel that the window is superior in every respect to any window on the market.

Very sincerely yours,

Superintendent of Schools

Awning Type Excel

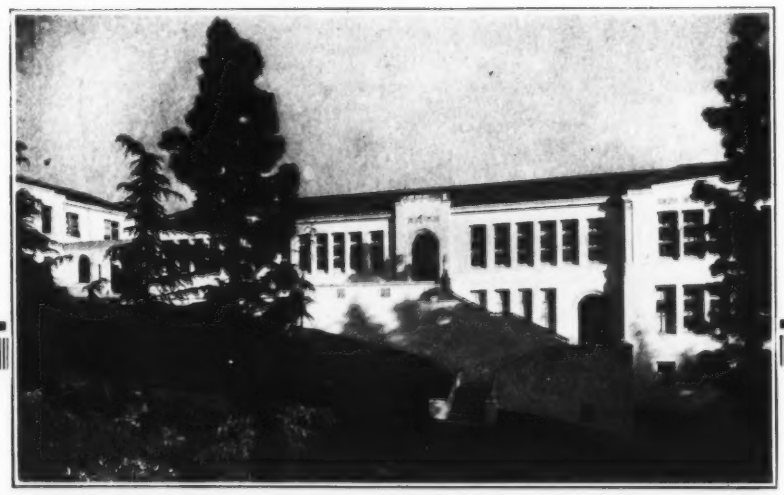
IN hundreds of the country's latest schools "Donovan"—Universal Windows of the distinctive awning type have insured a healthful abundance of daylight and fresh air.

Their operation is most simple — movement of the bottom sash simultaneously opens or closes the upper sashes. Or release a catch and the bottom sash operates independently leaving the upper sashes in any desired position. Each sash is self-balanced. No window poles to use, no tugging or straining. An incentive to better ventilation of schoolrooms. The result means fresh air in any volume without drafts.

UNIVERSAL WINDOW COMPANY
General Sales Office — 1916 Broadway
OAKLAND, CALIFORNIA

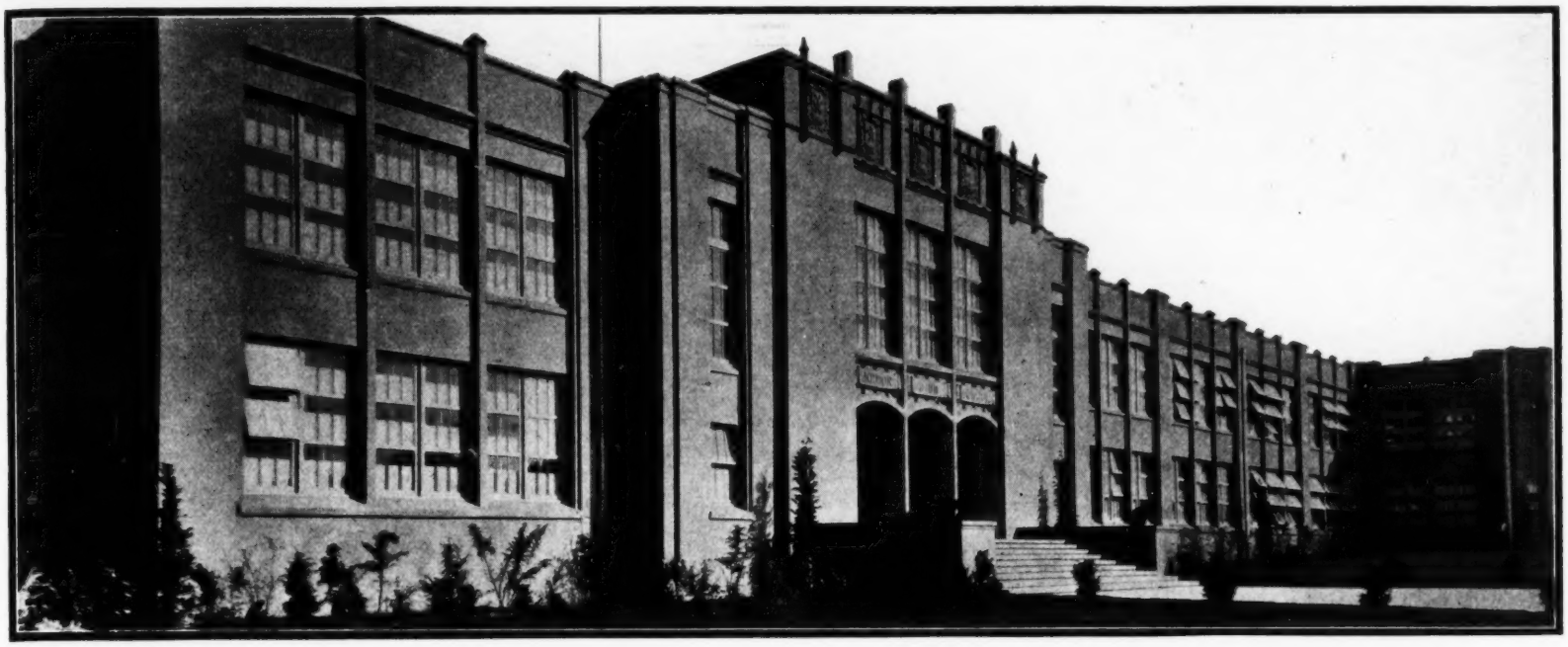
Agents in all Principal Cities of the United States

Information about the Truscon Donovan Awning Type Steel Windows may be secured from the Truscon Steel Co., Youngstown, Ohio



PIEDMONT JUNIOR HIGH SCHOOL, PIEDMONT, CALIFORNIA
Wm. H. Weeks, Architect, San Francisco, California

DONOVAN
UNIVERSAL
WINDOWS
AWNING TYPE



EUREKA JUNIOR HIGH SCHOOL, EUREKA, CALIFORNIA
John J. Donovan, Architect, Oakland, California

Windows for Schools

Board of Education

Eureka School Department

Eureka, Cal. Sept. 13, 1926.

Universal Window Company.
1916 Broadway,
Oakland, California.

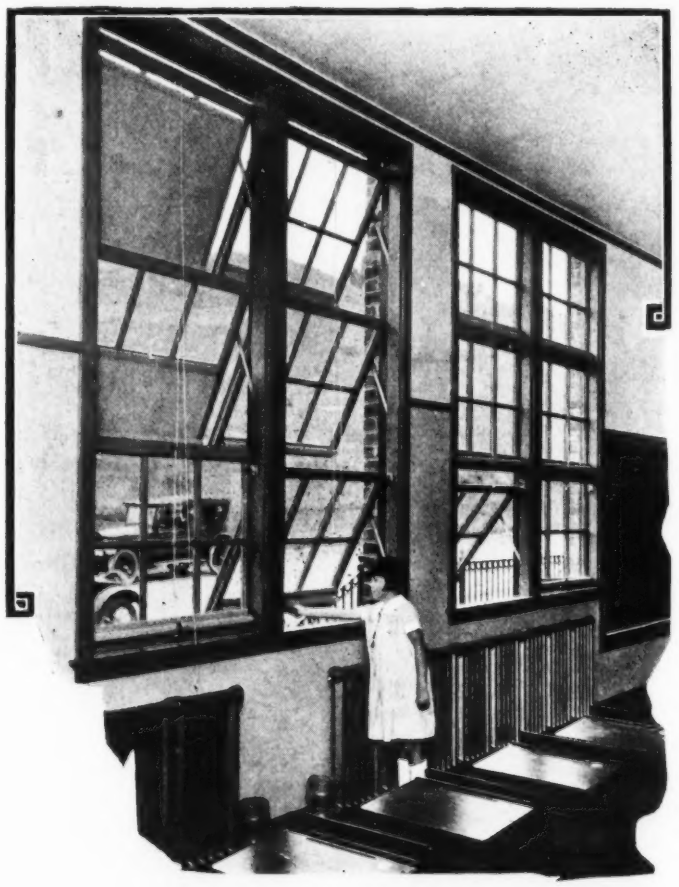
Gentlemen:

I am pleased indeed to extend to you my hearty congratulations on the many accomplishments of the Donovan-Universal windows which have been installed in our new Junior High School at Eureka.

Selection of this window followed a most thorough investigation of the merits of this and other types of windows available for schools and we are satisfied that this window is a real contribution to the health and educational progress of children.

The easiness and positiveness in operation, the advantages in shading, the fact that there is no mechanism to get out of order, the complete control of the ventilation and especially the elimination of the window pole in the operation of this window makes it in our judgment most desirable for schools.

Sincerely yours,
Supt. of City Schools.



UNIVERSAL WINDOW COMPANY
1916 Broadway, Oakland, California.

Send me complete literature on Donovan Universal Windows, Awning Type for Schools and Hospitals.

Name.....

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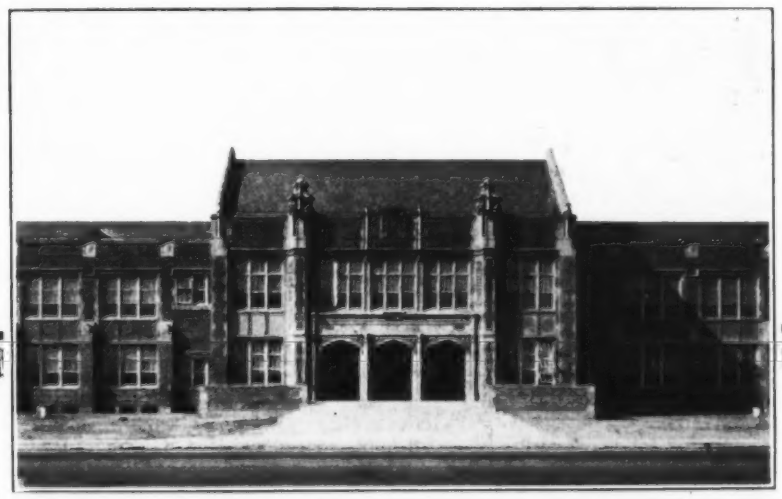

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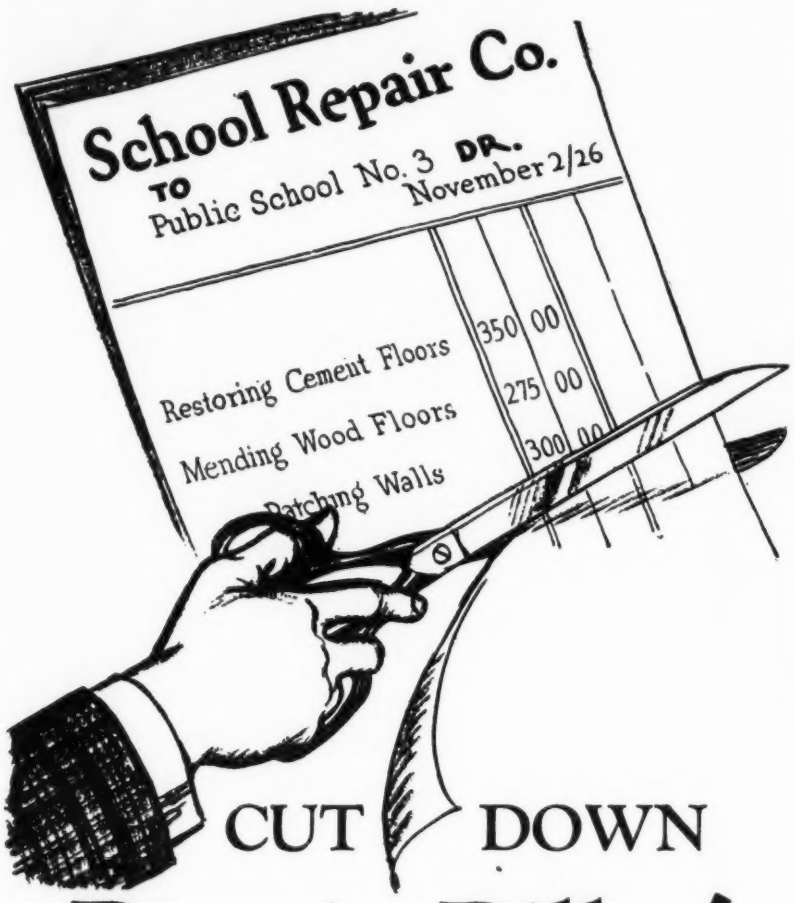
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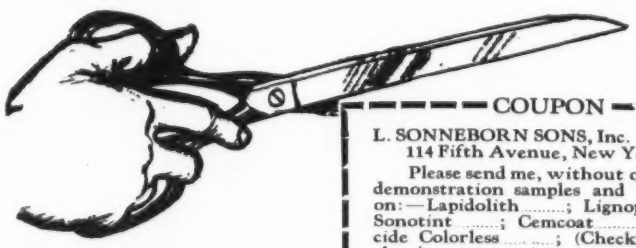

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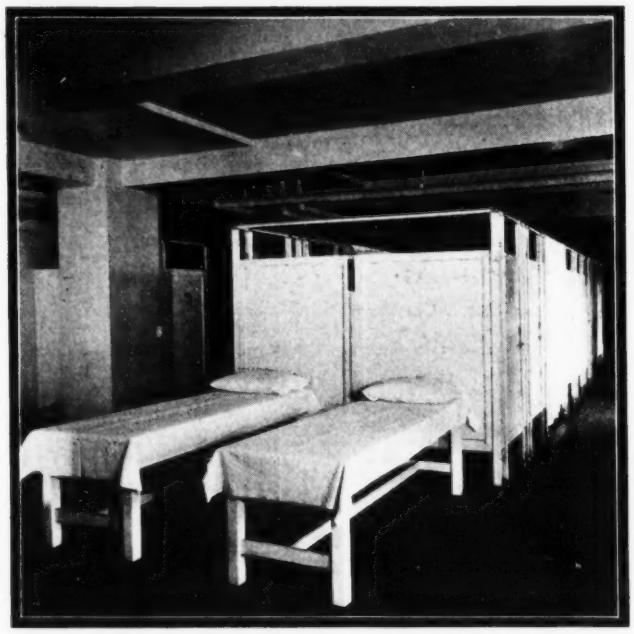

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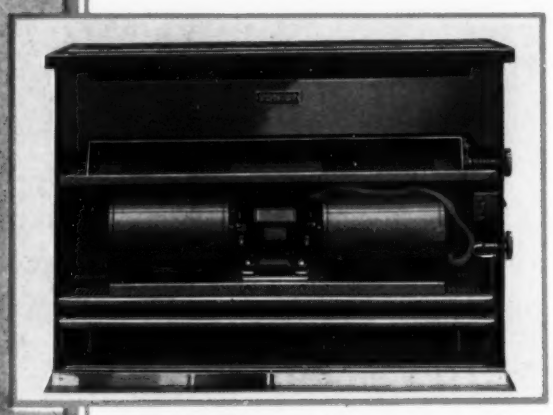
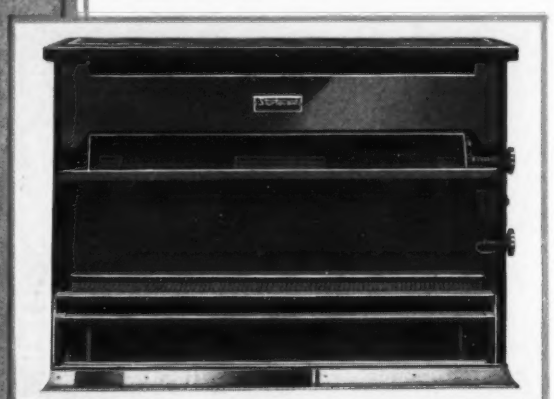


Unit Ventilator with Front Removed

Note simple construction and accessibility of all parts. Entire front of cabinet is removed in a few seconds by merely releasing two locks. All control devices, with exception of knobs, housed within cabinet. Inlet and mixing dampers arranged for either manual or automatic control as desired.



Unit Ventilator with Front and Fan Assembly Removed

Entire fan unit assembly may be removed from cabinet without loosening any bolts or screws. Air filter is housed within the inlet damper as shown. All air, before it reaches the fans, is cleaned.

Fan Unit Assembly

Here the strong, compact construction of the Sturtevant Unit Ventilator is particularly noticeable. Fan wheels and motor are supported on spring base—all vibration absorbed by springs. Fan housings are guided into place on bottom of mixing damper assembly. Motors for all standard electric currents are interchangeable.

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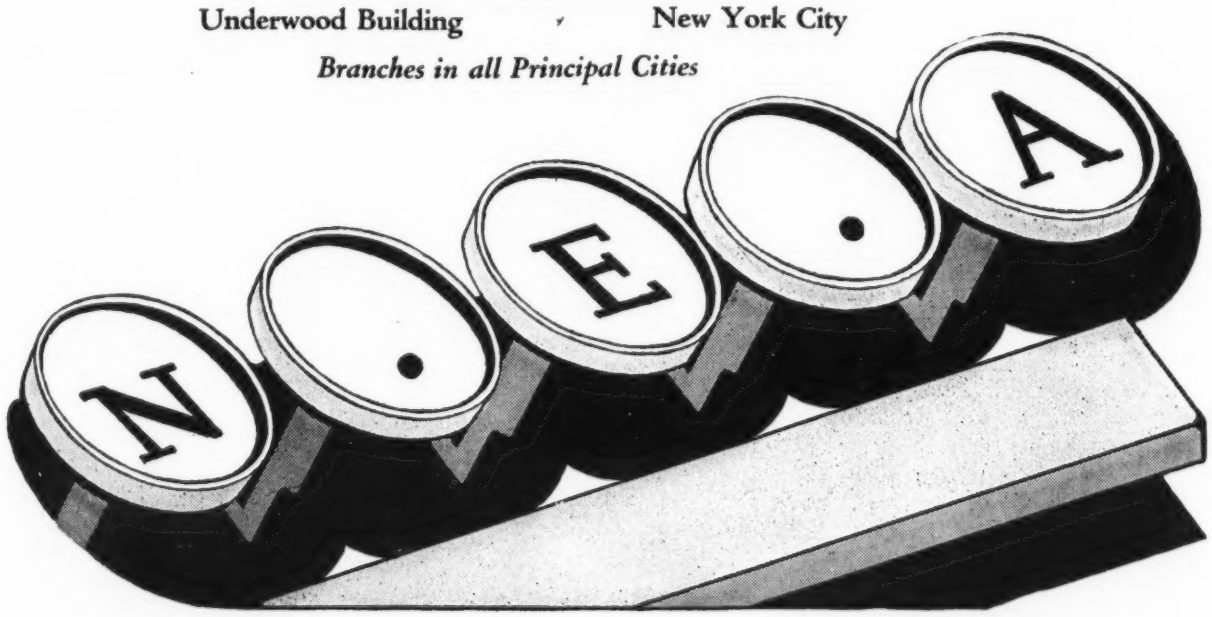

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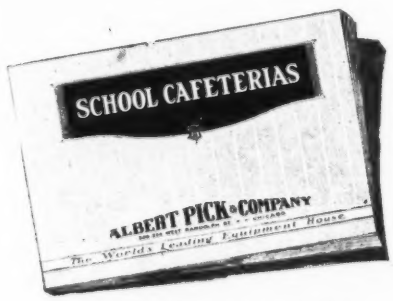

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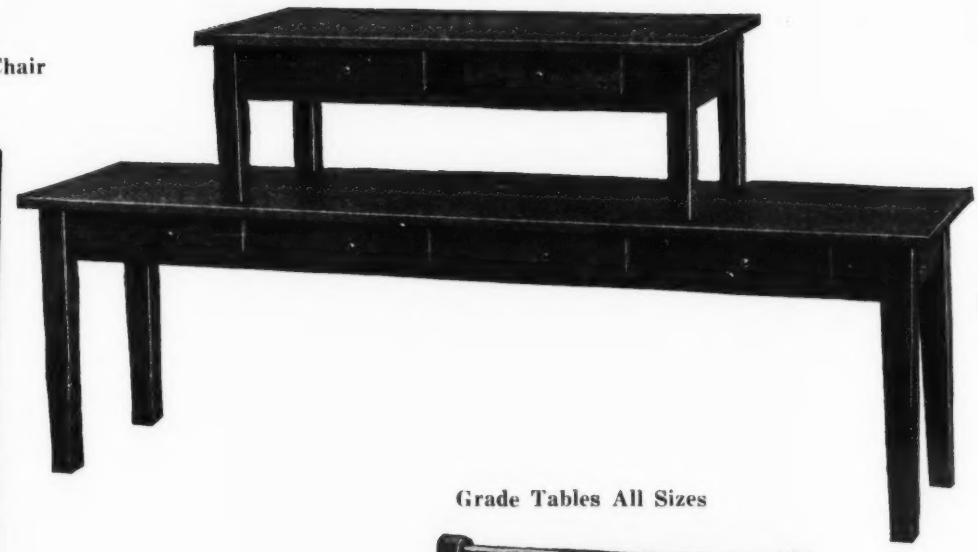

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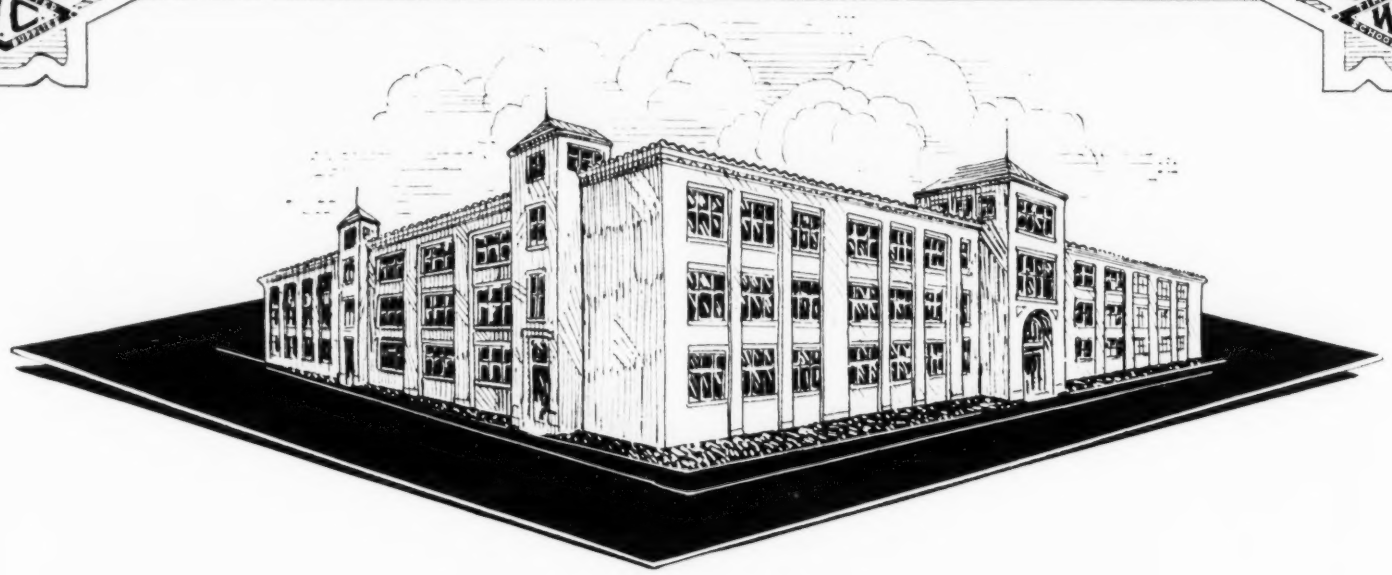

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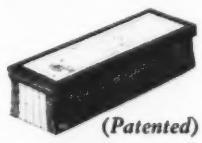

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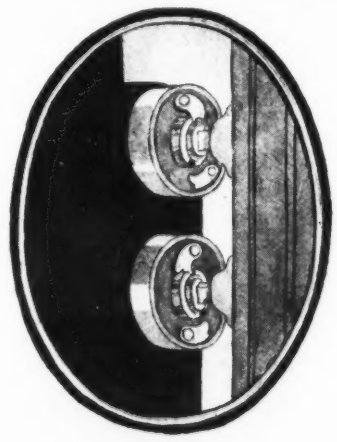
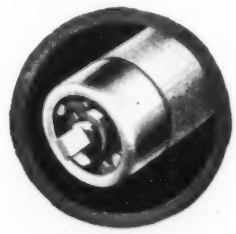
Ask your dealer to show you Hartshorn Shade Cloths in a variety of tints designed especially for classroom use.



For schoolroom use, Hartshorn Shade Cloths mounted on the smooth-running Hartshorn Roller, with No. 86 or No. 87 double brackets, have high endorsement. The double bracket feature solves the ever-important problem of light and air control.

STEWART HARTSHORN CO.
250 Fifth Ave., New York

Hartshorn
SHADE PRODUCTS
Established 1860



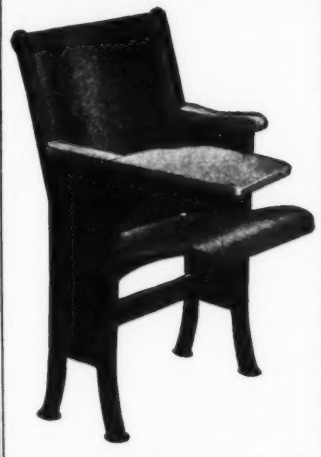
A shade is only as good as its roller.

MADE BY THE MAKERS OF HARTSHORN SHADE ROLLERS

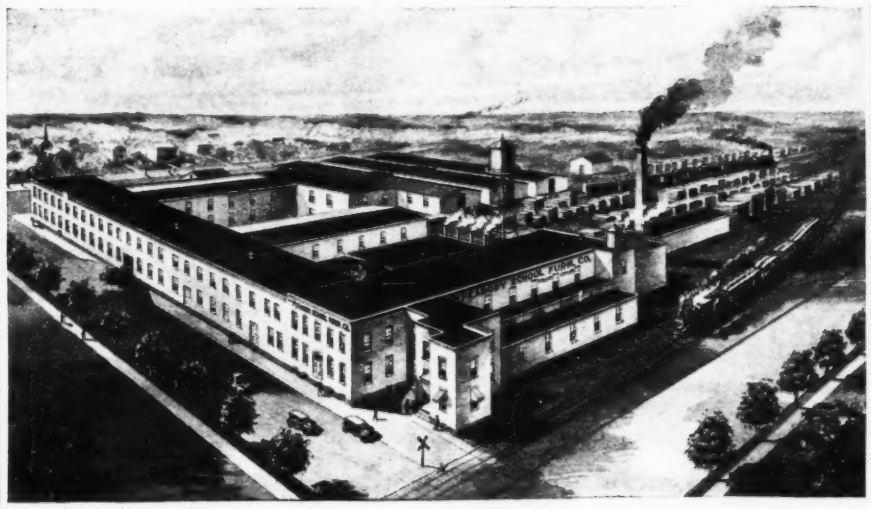
MOVABLE CHAIR DESK.
Three Adjustments.
Rigid, Non-Vibrating Top.

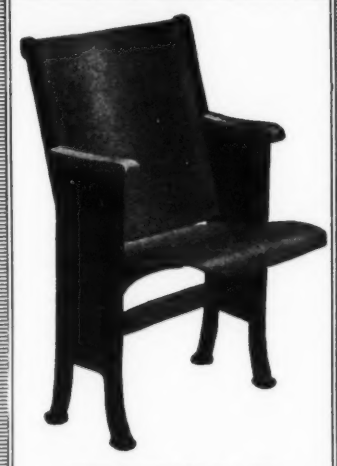
SANITARY SCHOOL DESK.
Noiseless Folding Seat. Semi-Steel Standards.

SANITARY ADJUSTABLE DESK.
Adjustable Seat and Top.
Semi-Steel Standards.



TABLET ARM CHAIR No. 505.





OPERA CHAIR No. 506.

THE HOME OF PEABODY PRODUCTS

The home of **Peabody Products** is a modern plant, operated by an efficient industrial family. Twenty years' experience in the manufacture of high grade School Furniture. Every article sold with a guarantee to give complete satisfaction in every respect. "Peabody" service will please you.

School Office and Classroom Furniture

The Peabody School Furniture Co.

North Manchester, Indiana

Write for Catalog and Price List

FOLDING CHAIR No. 51.
Form Fitting 5-Ply Veneers.
PATENTED JAN. 18, 1910.

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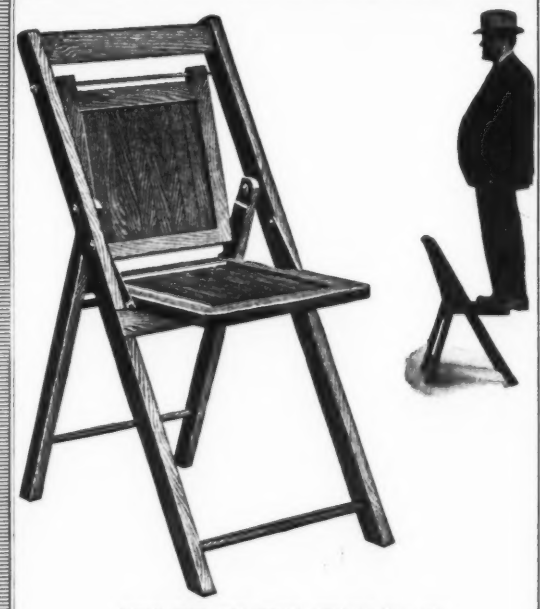
TEACHERS' DESKS—SEVEN PATTERNS.
Built with Solid Oak Tops.

SERVE YOU BEST



NON-TIP FOLDING CHAIR No. 70.
Folds as Flat as a Board.
PATENTED NOV. 12, 1918.

THE WORLD MOVES
DETROIT MOVABLE DESKS
WE LIVE AND LEARN

The Improved "DETROIT CHAIR-DESKS" (as illustrated) is highly praised by Authorities on Modern School Equipment.

The entire "DETROIT" line consists of High School Single and Double Unit Tables, Tablet Arm Chairs, Kindergarten Tables and Chairs and is worthy of serious consideration.

Detailed information on the complete line will be furnished on request.

DETROIT SCHOOL EQUIPMENT CO.
General Offices and Factory, Holly, Mich.

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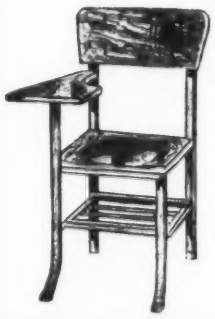
ROYAL FOLDING
WITHOUT OBLIGATION

SCHOOL FURNITURE of STEEL

SEE AND TRY BEFORE YOU BUY



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Samples sent for Free Trial at no expense. No obligation. Catalog on request.

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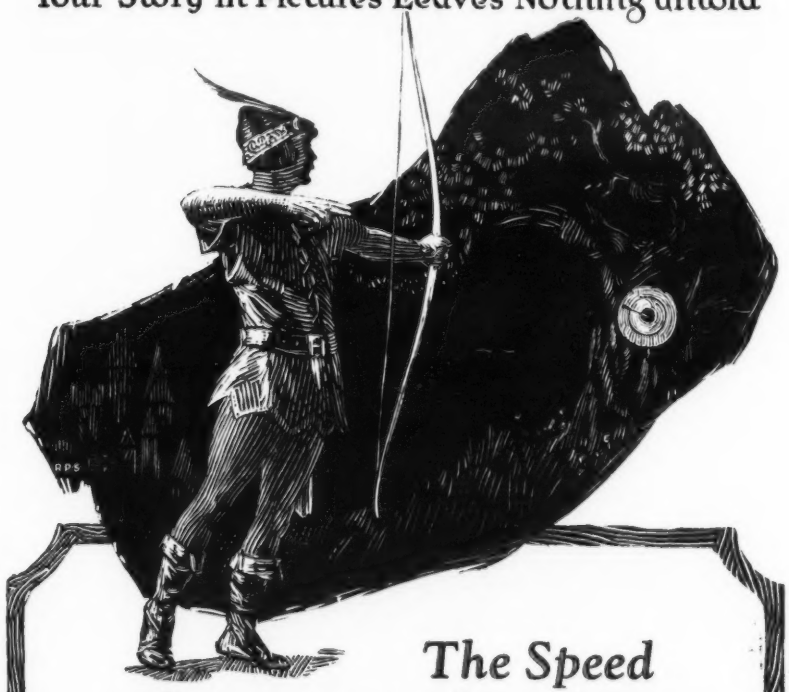
Your Story in Pictures Leaves Nothing Untold



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Your product and selling points portrayed in pictures arrive in the reader's mind instantly and unmistakably; where words most often miss the mark.

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ECLIPSE

An Invitation

A cordial invitation is extended to the members of the National Education Association to visit us at booth No. 244 at the Annual Meeting of the Department of Superintendence in Dallas, Texas, February 26, to March 3, 1927. A complete exhibit of Modern School Furniture will be shown for your approval

THE THEODOR KUNDTZ CO.
CLEVELAND
Offices In All Principal Cities

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Possessing Merit—

The Derby school units possess merit. Manufactured under the Thompson patents they provide Correct seating for every child. Manufactured in a variety of patterns they meet every school need. Manufactured by Derby they are insured durability and fine workmanship.

Earl Thompson, noted orthopedist, designer of the Derby Correct Posture Chair, will attend the N. E. A. Convention at Dallas. With him will be Mr. C. V. Jackson of the Derby school seating staff. Messrs. Thompson and Jackson will be glad to meet again their numerous educator friends and to form new friendships among those attending.

An exhibit of Derby Correct Posture School Equipment is planned.

P. DERBY & CO. INC.

Chairmakers for 83 years

GARDNER, MASS.

NEW YORK CITY BOSTON

ANNOUNCING

The Improved Elgin School Table

IN keeping with our 60-year policy of constantly improving our products, we announce the following outstanding improvements to the Standard *Elgin School Table:*

1. *Numerous betterments on the under frame, including metal corner irons and other strengthening features.*
2. *Beautiful 5-ply top—it stays "put."*
3. *Lacquer finish.*

The *Elgin School Table* is now, more than ever, a permanent investment and represents a real value. Schools the country over are demanding this equipment to meet present-day standards in the seating arrangements of their first and second grades.

A portable table, permitting clearing of floor space. Hygienic, sanitary. Permits greater freedom, increases seating capacity, reduces costs and follows out the successful new plan of "group instruction."

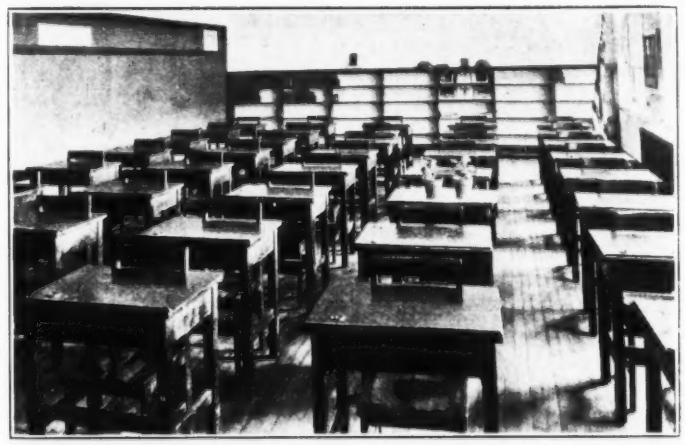
Send for free booklet "SEATING EFFICIENCY."

RINEHIMER BROS. MFG CO.

ESTABLISHED ELGIN, ILL. SINCE 1867

DEPT. OF SCHOOL FURNITURE

ELGIN SCHOOL TABLE



Class Room, High School, Lancaster, Pa.—Readsboro Furniture.

IN SCHOOL FURNITURE YOU WANT DURABILITY, COMFORT, AND APPEARANCE.

IN "READSBORO PRODUCTS" YOU HAVE ALL.

Adjustable and Two-Unit School Desks and Chairs. Tablet Arm Chairs.
Portable Assembly Hall Seating in Sections in a wide variety of styles.
Kindergarten Chairs and Tables, Sand Tables.
Folding Chairs for every purpose. Umbrella Racks.

Inquiries and Orders receive careful and prompt attention.

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308 Prospect Bldg.
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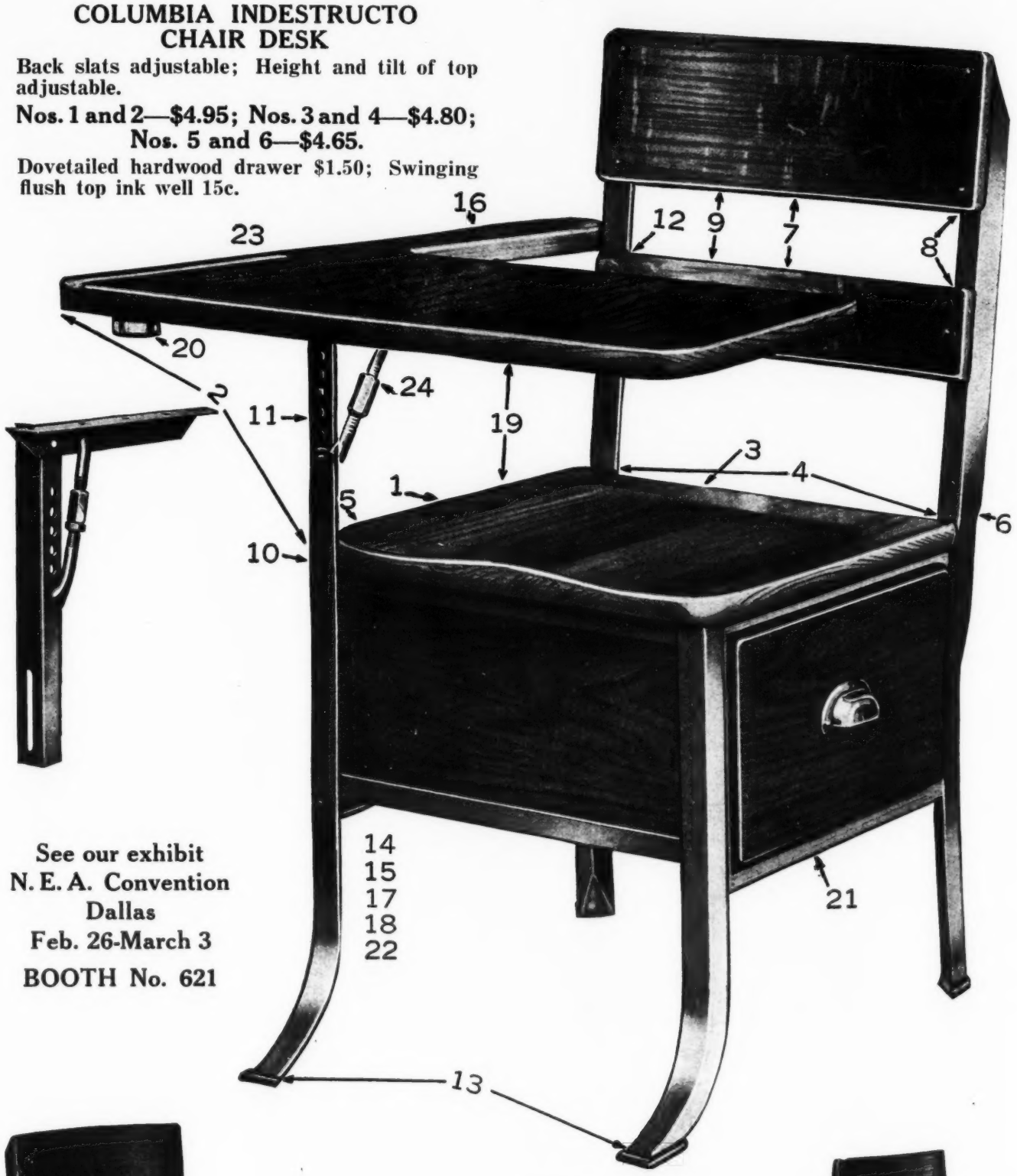
COLUMBIA SANITARY STEEL ADJUSTABLE SCHOOL FURNITURE

COLUMBIA INDESTRUCTO CHAIR DESK

Back slats adjustable; Height and tilt of top adjustable.

Nos. 1 and 2—$4.95; Nos. 3 and 4—$4.80; Nos. 5 and 6—$4.65.

Dovetailed hardwood drawer $1.50; Swinging flush top ink well 15c.



See our exhibit N. E. A. Convention Dallas Feb. 26-March 3 BOOTH No. 621

COLUMBIA INDESTRUCTO TEACHER'S CHAIR AT $3.50

INDESTRUCTO'S POINTS.

1. Seat of proper height.
2. All corners rounded.
3. Seat saddled to fit body.
4. Seat of proper width.
5. Seat tilted higher at front.
6. Back tipped backward slightly.
7. Back curved to fit body.
8. Back adjustable in height.
9. Back of solid quartered oak.
10. Seat extends slightly under top.
11. Desk height adjustable to child.
12. Desk slant adjustable.
    11 and 12 constitute a Tilting Top.
13. Curved front feet give same strength and effect as separate support.
14. Desks easily moved for sweeping.
15. Noiseless, no hinges or swivels.
16. Arm rest extending backward.
17. Simplicity—Examine illustration.
18. Durability—Indestructible steel.
19. Finish, dull, lasting quality.
20. Flush top inkwell, noiseless, removable.
21. Box or sliding drawer.
    May be used on either side.
22. Nothing to catch dirt.
23. Pencil groove on top.
24. Adjustable.

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MOORE BROTHERS ~ PROPRIETORS
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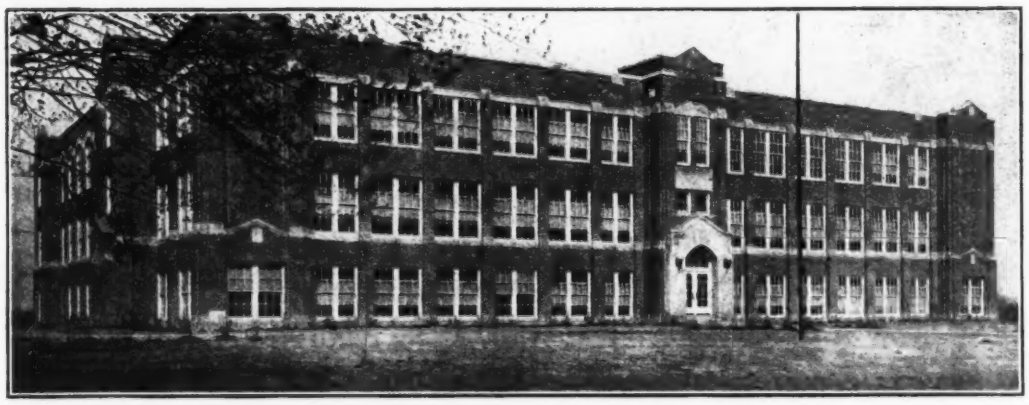
COLUMBIA INDESTRUCTO TABLET ARM CHAIR AT $4.25. WITH PERFORATED SHEET STEEL BOOK SHELF 25c EXTRA

COLUMBIA SANITARY STEEL ADJUSTABLE SCHOOL FURNITURE

School Cafeteria equipped with Gunn Lino Tables



Lincoln Consolidated School—Ypsilanti, Mich. Warren Holmes-Powers Company, Architects

GUNN

"LINO" Desks

Trademark Reg.

for Teachers

"LINO" Tables

Trademark Reg.

for Cafeterias
are now used in
many of our
FINEST SCHOOLS

No Breakage of Tops

Quiet and Pleasing

Sample of Top and Full Particulars on Request

THE GUNN FURNITURE CO.
GRAND RAPIDS, MICH.

The Model Desk for Modern Schools

"UNION"

Liftop Movable and Adjustable Chair Desk

A modern design that embraces many practical features which time and experience have proved entirely correct.

"Union" Liftop Movable Study Chairs represent long experience in designing and producing high grade furniture for the schoolroom. All of the non-essentials have been eliminated; simplicity, durability and serviceability characterize these model pieces of school furniture.

The roomy seat and curved back form a restful combination. The plus or minus adjustment permits the writing table to be shifted to or from the pupil to accommodate his size. The lifting top provides easy means of ingress and egress without the usual distortion.

The convenient and commodious drawer is responsive and is equipped with stops which prevent falling out unexpectedly. The tops have that natural, permanent slant which experience has taught is the proper angle for both reading and writing.

1 and 2 Movable $10.25
3 and 4 Study 10.00
5 and 6 Chairs 9.75
F.O.B. Factory

Made In Six Sizes To Fit The Different Grades

A large stock just completed for immediate shipment

Union School Furnishing Co.

Manufacturers and Distributors of High Grade Furniture and Supplies for Schools

GENERAL OFFICES:
1034 W. Van Buren St., Chicago, Ill..

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Memphis, Tenn.; DeLand, Fla.; Columbus, Ga.

Our Motto: ***All School Furnishings***

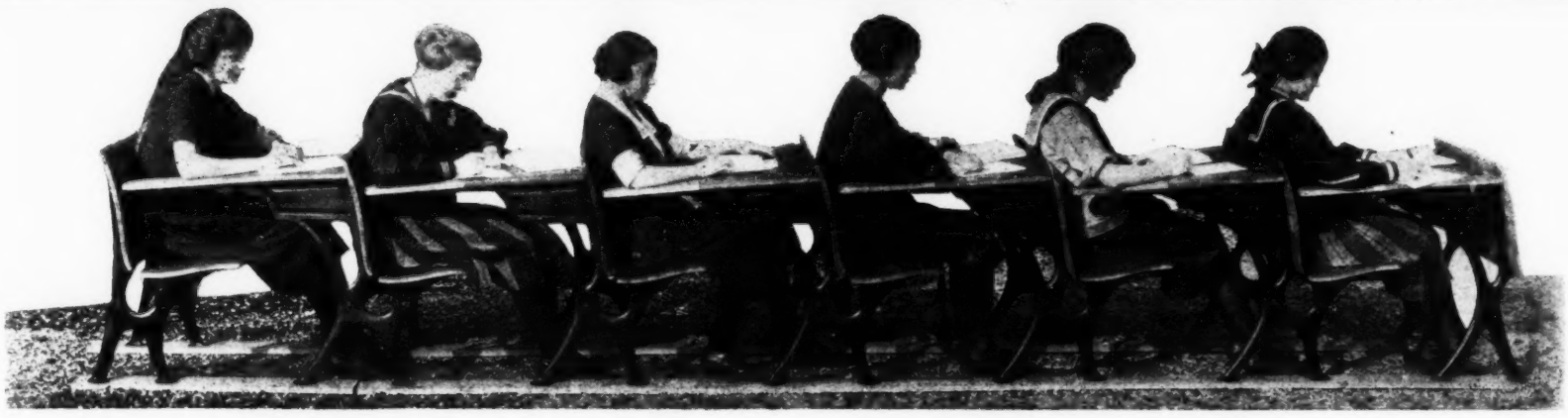
MANUAL TRAINING BENCH No. 280

A GLANCE AT THIS NEW PATTERN will show that the combination of various sized drawers and cupboard makes an unusually practical bench. Notice, especially, the small drawer which is intended to hold nails, screws, small tools, etc., which so easily become misplaced when kept with the larger tools. Being able to immediately lay hands on these small but necessary items, will be the means of saving a great deal of time, thereby promoting efficiency. Also, notice the large cupboard, which will hold such tools and materials which can not be kept in the general or three private drawers. Bench is equipped with our Abernathy Rapid Acting Roller Nut Vise No. 70D on front, adjustable stop and dog.

C. CHRISTIANSEN

Manufacturer of this line since 1898

2814-2842 West 26th St., Chicago, Ill.



Here Is a Desk
That Will Make Better Schools

The efficiency of the teacher's work depends upon the degree of intelligent reciprocation on the part of the pupils—

And that reciprocation is determined, to a remarkable degree, upon their comfort.

This Company is pioneering a movement toward more correct and comfortable seating. We ask that you permit us to place the information before you.

Correct Posture Also More Comfortable And More Convenient

The tendency of the average school desk is to force the pupil to twist in the seat—to face the light.

These disadvantages tend toward the development of Spinal Curvature, Defective Eyesight and Nervous Disorders.

Moeser Extended Arm Top

By the use of the Moeser Extended Arm on National Desks we obviate all necessity for the pupil twisting in the seat and facing the light in order to secure support for the arm when writing.

Support for the arm is afforded when pupil is facing the front, with full support for the back when writing. Better penmanship is a result, with less fatigue and nervous strain.

This feature tends to foster correct posture, is more comfortable and convenient, and greatly increases the usable writing and working surface.

Supt. W. J. Hamilton, of the Public Schools of Oak Park, Ill., wrote:

"The Moeser arm rest on the desks is the best thing that we have found to insure correct posture, and the pupils assure us that the seats are more comfortable and more convenient for desk work through the addition of this arm rest. Our Board is placing a large order for further installation of this type of desk."

The Moeser Supporting Arm Top can be furnished with any National School Desk.

We should like to supply you with complete information on this distinct advance in school seating. Write us for circulars, etc.

THE NATIONAL SCHOOL EQUIPMENT CO.
Manufacturers of Complete School Equipment
PORT WASHINGTON, WISCONSIN

A Wonderful Finish That Does Not "Scratch"

We have developed a remarkable finish, by which the tannic acid in the wood is brought to the surface, bringing with it the natural color of the wood. The finish is developed within the fibre, consequently it cannot wear off nor rub off.

It has a richer, deeper color and a velvety "feel." It is both "hard" and "elastic"; also transparent. It is very pleasing and will harmonize with any interior finish. Woods treated by this process wear longer and retain their original finished appearance longer.

Ask us about it.

NATIONAL School DESKS
"Famous for Comfort"

Viking All-Steel Indestructible Folding Chair

STRENGTH—

BEAUTY—

COMFORT—

It has them all

Viking Standard Finish is a rich olive green and it is baked on to insure a permanent finish. The chairs may be had in standard design in the following finishes: Walnut, Mahogany and Gold-Bronze.

The "Viking" Indestructible Folding Chair costs little more than the ordinary wooden chair.

Ideal for Schools

The Viking All-Steel Indestructible Folding Chair is built to stand up under unusually rough treatment, and misuse that is given to folding chairs.

The Viking is built of 20 gauge Steel throughout—is fireproof and cannot be bent or sprung out of shape. It cannot tip, sway, squeak or rattle and its BALL FEET make it noiseless and prevents scratching of the finest floors. It is 32½ inches high when open and the paneled seat is 14 x 13 inches.

Comfort has been built into the "Viking" Chair and with its inclined back it insures perfect comfort, which is not to be found in any other folding chair. We have designed the fibre seat and the full upholstered seat for those who desire even more in comfort.

Write for further details.

See our exhibit, N. E. A. Convention, Dallas — Feb. 26th-March 3rd — BOOTH No. 151.

MAPLE CITY STAMPING COMPANY, PEORIA, ILLINOIS.

STURDY FURNITURE

No. 810 Art Table

All "NYB" Tables and Stands are designed and built to withstand the most severe usage in the classroom.

Note the sturdy, compact design of our No. 810 illustrated below. This is a practical and efficient design, provides individual lockers for the students, eliminating confusion in the changing of classes.

Top, oak or pine, 20 x 34 x ⅞ inches with an adjustable top 20 x 24 inches.

Height of table 30 inches.

One general instrument drawer 16 x 16 x 2½ inches.

Three private lockers, 16 x 22 x 2¾ inches.

Three instrument lockers, 2¾ x 12 x 4 inches.

Master-keyed locks if desired.

Made of oak and finished as desired.

Our standard finish is three-coat, dull, rubbed smooth.

We solicit the privilege of quoting on standard as well as special equipment.

Ask for a copy of Catalog "N."

New York Blue Print Paper Company,

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Put the Guaranteed

LITTLE GIANT

ELECTRIC ERASER CLEANER

to Work in Your School

Price $32.50

The Little Giant is a modern hygienic device that should be in every school. Put this accepted aristocrat of blackboard eraser cleaners to work in your school under our guarantee of satisfaction.

THE Little Giant has been tested by continuous use in thousands of schools throughout the country. It has proved to be efficient, in all respects, noiseless, dustless, simple and swift in its operation. It is guaranteed to clean blackboard erasers to your entire satisfaction — or your money will be refunded.

The Little Giant is operated by a Universal motor, adapted to all electric currents; it is provided with nine feet of Underwriters' lamp cord with Universal plug ready to attach to any convenient lamp socket. Strongly made of malleable iron and aluminum, its weight is but eight pounds and it can be shipped by parcel post.

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THE LITTLE GIANT ELECTRIC ERASER CLEANER

Silent - Swift - Dustless - Simple - Inexpensive

Economical—Everlasting

TRADE MARK
ENDURAROC
BLACKBOARD

ENDURAROC is everlasting — growing harder and possessing greater tensile strength with age. The process of manufacture is regulated by formula so that each and every slab is identical and does not vary in quality. **ENDURAROC** is just as permanent as concrete, brick, slate or other similar building materials.

ENDURAROC is made of asbestos fibre, Portland cement and coloring matter united under hydraulic pressure of 3,000 pounds to the square inch into dense homogeneous slate colored sheets ¼ inch in thickness. The panels then are put through our special surfacing process, to be had only with Rowles' products. The finished product, in its various treatments, is subjected to more wear than it will ever receive in a lifetime of school service.

ENDURAROC is the ideal blackboard for any type of school building regardless of size, cost or location. It is fire and waterproof, will not warp, bulge, expand or contract. It is uniform in thickness, light in weight, is available in long lengths, easy to handle, and cannot be broken by jars or vibrations. **ENDURAROC** weighs less than one-half as much as slate but is harder and possesses greater tensile strength.

ENDURAROC is from every viewpoint the most economical blackboard—not only in first cost but in installation expense, transportation charges and upkeep.

Write your nearest distributor or direct to factory for samples and further information.

Examine ENDURAROC at our exhibit in Dallas February 26th to March 3rd.

Let us help you solve your blackboard problem. Consult our representative, space 541, at Dallas February 26th to March 3rd.

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Made in three sizes
Large
Medium
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No. 600, illustrating
Size "A" Desk, Open
Box Style

THE "ARLO"
ADJUSTABLE PEDESTAL DESK

The "Arlo" Adjustable Pedestal Desk is our latest contribution to modern hygienic school room seating. A beautiful desk, both in design and finish, it is absolutely sanitary—exceedingly well adapted to the varying needs of any class-room and guaranteed to withstand the strenuous requirements of every type of class room service.

The pedestal is made of semi-steel, constructed to give greatest strength at the points of greatest strain. The broad, massive base is cup shaped and when screwed to the floor will never pull loose.

The "Arlo" Adjustable Pedestal Desk will last a lifetime; has steel sides and back and the top is made from maple or birch, finished in Arlo Brown (American Walnut).

Adjustments are simple and easily made. Book box chair seat are independently adjustable. This is a distinctive feature and makes it possible to adjust "Arlo" desks to meet the individual requirements of each pupil.

The "Arlo" Line includes The Arlo Adjustable Pedestal Desk with Study Desk, The Arlo Non-Adjustable Pedestal Desk and the Arlo Pedestal Tablet Arm Chair.

Descriptive literature and prices on request.

Flexibility of adjustments assures each pupil being properly fitted, insuring correct posture and real comfort.

Arlington Seating Company

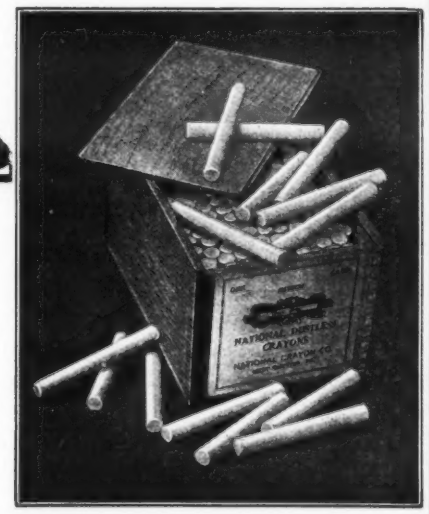
Office and Factory Arlington Heights, Ill.

VUL-COT is solid at sides and bottom—so that even the smallest particles cannot sift through onto the floor. Vul-Cot cannot dent or bend; cannot split or break; will not scratch fine furniture. Three out of five who buy equipment for schools and offices specify Vul-Cot. Guaranteed for five years—many have been in service for thirty. At stationery and school supply houses!

VUL-COT
- the standard waste basket

National Vulcanized Fibre Co., Wilmington, Del., U.S.A. *Offices in principal cities*

NATIONAL
DUSTLESS
CRAYONS



are truly
Crayons of Character

Free of grit from tip to tip NATIONAL CRAYONS respond perfectly to every stroke.

Being uniform in strength, every piece of NATIONAL CRAYON will withstand a firm grip of the fingers without danger of breaking or crumbling.

The dustless feature, combined with uniformity in all other respects, makes NATIONAL the ideal crayon for the classroom.

Your regular school supply dealer can serve you. If not, write direct.

THE NATIONAL CRAYON CO.
West Chester Pa.

101 YEARS OF MANUFACTURING EXPERIENCE

This is the new H - W Sanitary Pedestal Desk Set which is causing favorable comment among educators.

The H - W line of School Seats is most complete and contains many desirable models.

PROMOTES SANITATION AND PROTECTS HEALTH

THIS Sanitary Pedestal Desk Set, the latest development of our Research Laboratory, simplifies sweeping, promotes sanitation, and thereby protects the health of pupils. This modern desk, made in both adjustable and stationary types, will interest everyone concerned with practical seating. This desk is but one of the many patterns in our popular line of school-seating equipment which will be on exhibition at Booths 228-234, 329-335, in the Automobile and Manufacturers' Building, Fair Park, Dallas, Texas, during the National Education Association Convention from February 26 to March 3. We cordially invite your inspection.

Our seating experts will be glad to tell you more about this Sanitary Pedestal Desk Set and to suggest helpful seating plans. The nearest H-W warehouse will send a man to you without cost or obligation.

The advantages of this desk and many other school units are described in our new School Furniture Catalogue. Write for a copy.

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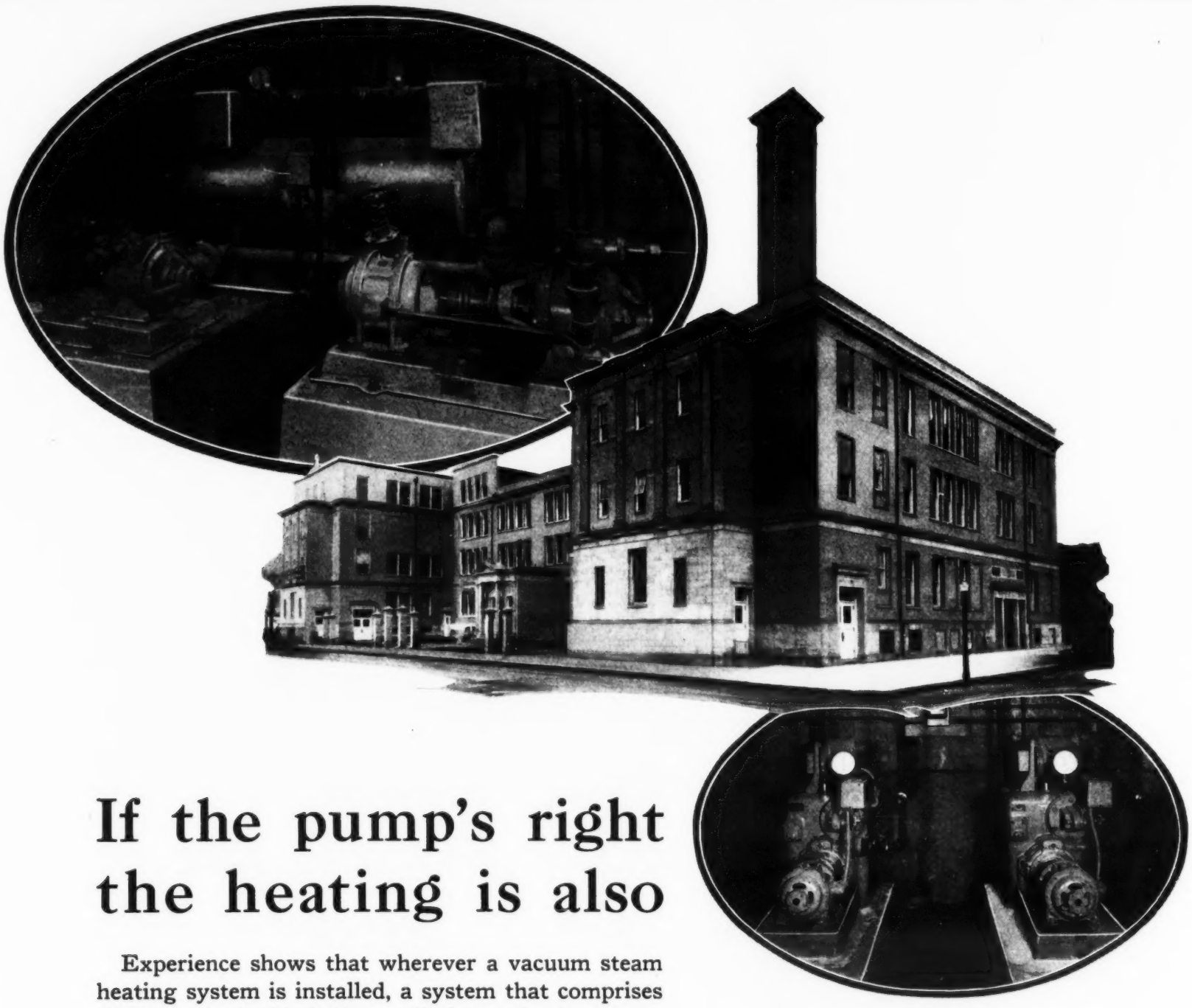

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THE AMERICAN

School Board Journal

A Periodical of School Administration

Frank Bruce, Publisher
John J. Krill, Business Manager
Frank O. Dunning, Jr., Eastern Manager

Published on the first day of the month by
THE BRUCE PUBLISHING COMPANY
354 Milwaukee St., Milwaukee, Wis.

Eastern Advertising Office:
50 Church St.,
New York, N. Y.

Volume 74 | February, 1927 | No. 2

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The Most Notable School Gathering

IN the number of outstanding schoolmen who will attend, the character of the subjects to be discussed, and the general educational influence which it exerts, the meeting of the Department of Superintendence of the N. E. A. constitutes the greatest of the year. The Dallas, Texas, meeting, February 26-March 3, 1927, will be no less important than its predecessors.

A quarter of a century ago the AMERICAN SCHOOL BOARD JOURNAL began to promote the meetings of the Department of Superintendence. It urged upon the boards of education throughout the country to instruct—not to request—but to instruct their superintendents to attend this important gathering and cover their expenses out of the school fund. No better investment in the direction of strengthening the school system could be made.

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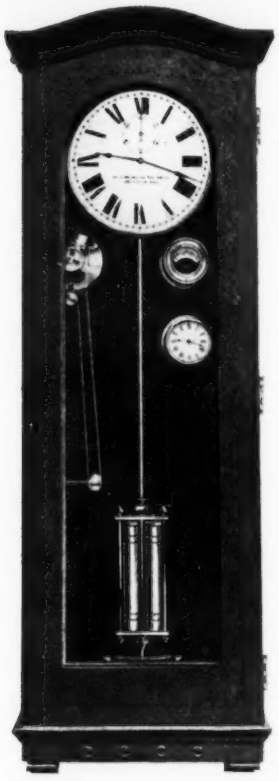
Subscriptions—In the United States and possessions, $3.00 per year. In Canada $3.50. In foreign countries $4.00. Single copies, not more than three months old, 35 cents; more than three months old, 50 cents. Sample copies, 35 cents. No orders accepted for volumes dating back more than five years. Back copies more than one year old, not available.

Discontinuances—Notice of discontinuance of subscriptions must reach the Publication office in Milwaukee, at least fifteen days before date of expiration. Notice of changes of address should invariably include the old as well as the new address. Complaints of non-receipt of subscribers' copies cannot be honored unless made within fifteen days after date of issue.

Editorial Material—Manuscripts and photographs bearing on school administration, superintendence, school architecture, and related topics are solicited and will be paid for upon publication. Contributions should be mailed to Milwaukee direct, and should be accompanied by stamps for return, if unavailable. Open letters to the editor must in all cases contain the name and address of the writer, not necessarily for publication, but as evidence of good faith.



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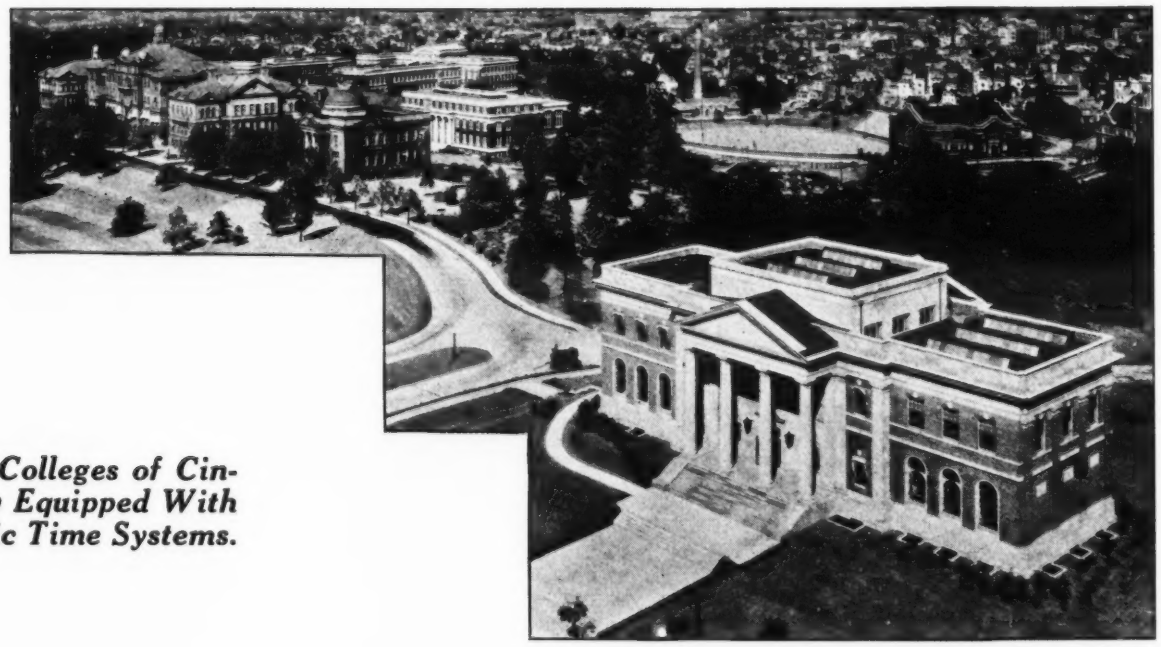

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THE AMERICAN

School Board Journal

Founded March, 1891, by WILLIAM GEORGE BRUCE

Volume LXXIV, No. 2 | FEBRUARY, 1927 | Subscription, $3.00 the Year

THE AMERICAN SPIRIT DEMANDS AN EQUAL CHANCE FOR EVERY CHILD: THE LAWS MUST BE REVISED!
EDUCATION
THE STATE
LAWS ON STATE SUPPORT OF THE SCHOOLS
POOR DISTRICT LITTLE TAXABLE PROPERTY AND MANY CHILDREN
MEAGER EQUIPMENT IN EVERY WAY
FINE BUILDINGS AMPLE EQUIPMENT COMPETENT TEACHING CORPS
RICH DISTRICT MUCH TAXABLE PROPERTY AND FEWER CHILDREN
Harold Heaton

THE PROBLEM OF THE RURAL SCHOOLS.

The Attendance Problem in Evening Schools

G. L. McCulloch, Assistant Superintendent of Schools, Jackson, Mich.

Everyone who has had anything to do with the management of evening schools realizes that the question of how to prevent losses is a serious one. The statistics of a large school system published several years ago, showed that six per cent of their evening-school students did not return after enrollment; that fifty per cent did not attend more than one fourth of the sessions, and that not more than twenty-five per cent completed their several courses. This may be an extreme case, but it is probable that most evening schools in the United States have a somewhat similar experience. Such a mortality seems appalling. These people had a serious purpose in enrolling in evening classes. Most of them had an ambition to fit themselves for greater usefulness, and consequent larger remuneration, in the industrial and business world. Many of them desired to improve their minds and to acquire a higher culture. All thought the evening schools offered them something very much worth while. If this is true, how can we explain such heavy losses as those indicated above?

The Reasons for the Losses

It is easy to account for some of the losses from evening-school classes. Many enroll with only the vaguest idea of what it will cost in time and effort to attend evening classes regularly. Others attempt work for which they have little capacity or preparation. Still others find that their social or business obligations seriously interfere with regular attendance. Some of these conditions the evening schools can do much to meet. Others present inherent and perhaps inescapable difficulties. Take the case of the young woman who has an ambition to fit herself for an office position. She is perhaps a salesgirl, or a factory worker, and has long envied the typist or stenographer who works in the manager's office. The evening school seems to offer an opportunity to prepare her for advancement. With high hopes she enrolls and takes up her studies. After a few nights' attendance, as she is about to get herself ready to start to school, some of her young friends come in to spend the evening. She can either excuse herself and attend her classes, or she can stay home and entertain her callers. It is probable she will do the latter. At the next session she resumes attendance at her classes, but she has lost a lesson, which is more or less discouraging. A few evenings later her best young man calls her up to tell her he has tickets to a popular show. She again can do one or the other of two things: Refuse the invitation and attend her classes, or make another break in her attendance with still further loss of continuity and interest. A few interruptions from these or other causes and the evening school's records show another loss.

Again, most evening-school students have already done a day's work, many of them an exacting day's work, when the time to start to evening classes arrives. It is a severe drain upon their physical resources to go out in all kinds of weather two or three evenings a week to spend two hours or more in severe mental application. There is a limit to physical endurance and many of those who enroll in evening schools soon realize that they are making too great a demand upon their strength and as a consequence must drop out.

Many enroll in evening school classes without an adequate conception of character of work involved in the subjects undertaken. A man who left school ten or twelve years ago in the fourth or fifth grade discovers he has made a mistake, when he attempts to learn bookkeeping or algebra. It may be said that the mistake is made in allowing those apparently lacking in preparation to attempt certain subjects. But, there is only one way to find out whether anyone can pursue a given subject with profit and that is, if he is really interested, to let him try it. He may succeed in spite of apparently insurmountable obstacles. He is certainly entitled to an opportunity.

Encouraging Regularity of Attendance

Evening schools have been conducted in this city for the past sixteen years. The enrollment has grown from about four hundred to an average of over seventeen hundred for the last four years. During this period the population of the school district has probably doubled. Each year we have had steady losses throughout the term. Each year we have sought to learn the causes and remove them as far as possible. Our teachers are selected with a view to special fitness for evening-school work. Two thirds of them are successful day school teachers, while one third are drawn from outside sources. Perhaps one half of the latter have had public-school teaching experience. All of them realize that vital, forceful, friendly teaching constitutes the best means of preventing losses. We do all we can to encourage regularity of attendance and continuance to the end of the course on the part of all who enroll.

To throw some additional light upon this problem we endeavored last spring to ascertain, as far as possible, the point of view of those who had dropped out. A circular letter was prepared and sent to all who had discontinued attending evening school classes. Among other things the letter said, "We want to find out just why our students stop coming to night school after starting. We want the real reason, or reasons, if there is more than one. If you think the fault is ours, do not hesitate to tell us so. We shall not be offended. We want to learn how to have a better night school.

Now, will you kindly answer these two questions:

1. Why did you stop coming to night school?
2. What can we do to make our night school better for those who attend it?"

In order to make it as easy to reply as possible, a stamped addressed envelope was enclosed, and instructions were given that the back of the sheet might be used and that no one need sign his name. One hundred twenty-five replies were received, of which ten were oral. Some of the replies were very brief, a few of considerable length. Fourteen letters were returned as not being delivered. These probably represented removals from the city.

Taken as a whole, the replies were most encouraging. Only thirteen expressed dissatisfaction with the instruction or the content of the courses offered. A number of these contained valuable suggestions. Especially noteworthy was the general spirit of cordial commendation of the teaching and the teachers in answer to the second question. Space does not permit quotation after quotation to substantiate this statement. Forty-one answers to the first question said their work interfered with further attendance, while nine gave the pressure of other engagements, social, business, or domestic, as the principal cause of discontinuing evening-school work. Twenty-seven stated that sickness prevented attendance, while seven gave sickness in the family as the reason. Thirteen were reported definitely as having removed from the city, and seven found attending evening school beyond their physical powers. "Marriage," "irregular attendance," and "no one to come with," were the few remaining causes.

Despite the fact that the writers were given the privilege of anonymity, a large majority of those replying signed their names. It is probable that the replies accurately indicated what seemed to the writers the outstanding causes of withdrawal from the evening school classes. Doubtless in many cases there were other contributing causes, but it seems reasonable to believe that from these replies we may learn the principal reasons why evening school attendance falls off so greatly.

But merely to ascertain the facts as herein stated does not discharge our responsibility. These facts may be true, but they probably do not comprise the whole truth. It is entirely conceivable that counteracting agencies might have been employed to prevent so great a mortality. A greater interest in the work of the evening schools, a keener realization of value received, the consciousness of objectives actually attained may well have operated to keep many in school in spite of what seemed to be serious obstacles. Not long ago a teacher of bookkeeping in an eastern evening school stated that he had not lost a student from any of his classes for several years. This man unquestionably brings something to his classes greatly lacking in the average evening school. It may be asserted with entire confidence that with better teaching, better adaptation of subject material to individual needs, a more attractive social environment, and a more sympathetic understanding and genuine human interest on the part of the teacher, the losses we have become accustomed to regard as inevitable may be materially reduced.

The Unit System of Ventilation

Paul G. W. Keller, Superintendent, Eau Claire, Wis.

Since the recent investigations, and reports on these investigations, the old subject of ventilation is again "in the pan." The so-called modern systems of large fan units did not, after all, give the best results. Air, heated by coils in a large chamber in one part of the building and forced through long conduits, through the various rooms, seemed to have lost its vital qualities. I say "seemed" advisedly, for whether it only seems to lack vitality or actually does lack it is the crux of the question. At any rate, the latest reports on the subject seem to indicate that direct-to-the-room-from-outside ventilation systems have the better of the argument to date.

Note: This article deals with the Unit System of Ventilation as installed in the new senior high school of Eau Claire, Wisconsin.—Editor.

In line with this thought and for the sake of greater economy of installation and upkeep, the board of education of Eau Claire, upon advice of the engineers, Rose and Harris of Minneapolis, and of the architect, E. J. Hancock of Eau Claire, and the superintendent, decided to install the unit system of ventilation.

The building is ventilated through three distinct units; the auditorium from a large fan unit in the top of the tower at the entrance of the building; the gymnasium, showers, locker rooms, and dressing rooms by six units attached to the two side walls of the gymnasium; the rooms by single unit ventilating machines in each room.

The air for the auditorium is taken in at a point above the roof and is heated by a large coil unit and sent through sheet metal conduits

(Concluded on Page 144)

Problems of the Superintendent

By A Superintendent

Nearly all the books and magazines that appear in print deal with large schools. Even though the author may give it a heading that applies to a small school, it will be found on investigation, that he has in mind what is termed a small high school in a thickly populated state and that, in the middle west, it would likely be one of the largest in the state. To my mind the small school of the west and middle west presents an acute problem that will need more attention in the years immediately ahead.

This condition will be made more apparent to observers if note is made of events of the last few years. The northwest states have suffered crop failures and readjustments since about the close of the war, taken as a whole. Added to this has come the sweeping epidemic of bank failures, making the financial problem acute. Since all support comes from the taxpayers there is a tendency to retrench, that may grow out of proportion to the real need for it.

The whole problem resolves itself into four fields or captions. It may be handled under these: I, The Superintendent and the School Board; II, The Superintendent and the Faculty; III, The Superintendent and the Community; IV, The Superintendent and the School. These overlap as do all fields, since the superintendent is an important factor in each.

I—The Superintendent and the School Board

Presuming that the superintendent changes locations he usually comes into the new position with the best wishes of the board for his success. However, it will likely spell success or failure for him in the end, if his attitude is different than was expected of him. Those of us who have gone through this experience realize that there is seldom a board that is unanimous on any question. For a while all seems peaceful but the usual neighborhood strifes are fully represented on the board. They are not apt to show until some decision has been made that in some way affects a faction. Of course, boards are unwilling to admit this condition but it exists, nevertheless.

The first thing, then, for a new superintendent is to take an inventory of the board. He will have to get the individual viewpoint of each member and then the collective viewpoint of the board as a whole. These are far from identical. It is not uncommon to have a majority of the board favorably impressed with a program or a move and to have one member block the whole process either by ugly personal tactics or by the fact that some personal relation such as debtor and creditor causes other members to withdraw their support.

This, without doubt, is about the most perplexing problem because it has to be solved almost before the new man has met any other people. It is, therefore, difficult for him to determine whether these people represent a cross section of the community as a whole or whether it happens, through indifference, or other cause, merely to be the group in authority.

He must then determine what part of the school is overdeveloped and what part is neglected, determine the proper amount of emphasis to place upon his recommendations, decide who may or may not control some board members from the outside and learn the personal habits of the men that may influence them. This must be done because every board prides itself on having done more than any previous board. It rarely ever stops to weigh the merits. An example of this will suffice. I made a purchase of an article that cost $30 once and the president of the board, who was in favor of it, said to me there would be a good deal of criticism and I asked the reason, pointing out to him that over $400 had just been spent more or less foolishly. He agreed but said that purchase bought something people can see when they drive by and what I bought merely helped the school.

This leads to an early decision as to why the group in charge is in charge. Do they merely want to "run" things because of the thirst for power so in evidence in the small town, or have they other and better motives? Having determined all the foregoing questions to his satisfaction, it is up to the superintendent to decide how much he can do without consulting his board, how much catering to it he must do, and how much opposition he can successfully incur. Often a little opposition from the board is a very good thing in the end, both for the superintendent and the school.

A glance at school elections will be enlightening. I have seen communities turn out better for a school board election than for any other election in the year. I have seen them where only the five board members and the clerk cast votes to perpetuate themselves in office. Either case is bad. The first is too critical and too apt to make a small issue overshadow the real school. The second shows civic death. Regardless of how well a board has done it should not be left without interest. Of course, back of these conditions must be the cause. Often where few votes are cast it is because people do not wish to stir up the strife incident to running a new candidate.

Thus far this may seem as all adverse criticism. It is merely an attempt to point out the pitfalls ahead. If they do not exist there should be general thanksgiving on the part of those concerned. As a rule some of them do. I have had boards that were too optimistic and granted too much on my recommendation. I have had them too suspicious of every move made in the office and I have had them part way between, honest, fair, and yet entirely out of their field on a school board. A successful stockman or lumberman or banker is not necessarily a good board member. Withal it may be said from my experience that there is no substitute for intelligence. The higher the general tone of the board the more likely it is to be fair and to do the thing that in the end will bring the largest returns. As to who should comprise a board I feel that is not for any superintendent to dictate.

II—The Superintendent and the Faculty

When all is said and done the faculty will be found to be the biggest problem of the superintendent. With the proper kind of teachers who will work for a program and who will stand for a school as a unit almost anything within reason may be accomplished. I have always appealed to teachers to keep school gossip among themselves and to subordinate personal differences. Perhaps my appeal might be summed up in the caution, *be professional.* To those in larger places this seems needless but it is vital in the small town. Usually the first deterring move comes through gossip destroying the faculty. When factions, groups, dissatisfied board members and busy bodies, in general, can find an opening in the faculty through which they can enter their propaganda they have driven the first wedge between success and failure.

It will often require all the tact and ability a superintendent can muster to secure elections and rejections according to merit. Then it is often not done. Too often the man or woman who fits into the groove already dug by the community is the one kept and the one who should have been kept is let go. Many times I have had people express their regrets for years afterward.

In my experience as a superintendent practically every teacher who has worked with me has been one who has been a credit to the institution. I have had few who were not loyal, professional, and capable. I have practically always chosen them, yielding only in the interests of harmony. I have followed the rule to yield on small points and to fight for big ones. It has been very true that relationships, church affiliations, and outside politics have figured in the minds of boards. As a rule, however, these have been used to strengthen rather than to weaken. The most dangerous one that I have found is factionalism in the board itself, often causing compromises that have lowered the value of the teaching force but have done it without any knowledge on the part of the individual concerned.

My first move is to strengthen the faculty. As a rule teachers who have stirred up the least opposition are considered best and are retained because there is no opposition. As soon as the most glaring misfits are disposed of and the remaining teachers are awakened to a new, definite program there will be the task of selecting new teachers. It has been my experience that it is difficult to get experienced teachers that are really good to come to small towns. I have, therefore, tried to get the best inexperienced young teachers I could find for the salary the board would pay and have practically run a second normal school. It has taken lots of my time and patience but they have the enthusiasm, the new ideas, and the desire to make good and I feel more is accomplished with them than with a mediocre teacher who is merely filling the place.

Last of all comes the superintendent himself. If he is not careful he will get into a rut, or if inclined to be ambitious he will wear himself out fighting for his program. If we will submerge our personalities we may stay for years, have few enemies and have few friends of value. If we will work for better things we may be overworked. Outside of school I am at present secretary of three public organizations, treasurer of two, and have often been called upon to fill in other places when emergencies have arisen. If possible, my wife is even more busy. On top of this I shall give what is about an average day, sometimes less, often more. From actual record kept by me one day I made 52 decisions wherein I decided for the faculty or students something that had to be positively approved or disapproved, had three visitors, seven students came for individual help, wrote six letters, taught three classes, had two play practices, and visited two classes.

The real issue in the above is not in the amount of work done. It is more the fact that in order to do all this the superintendent is so completely swamped that many important things are necessarily neglected. He neglects his reading, his social obligations, his recreation and his health. He has to be content with part of what he sets out each year to do. This is not even the big problem. The real danger is that he will soon feel that he is so busy with these small town things and with doing them in a small town way that he has, like the hero in The Great Stone Face, become like what he has associated with and will let his initiative die. There is real danger of this. Those living in the larger places are inclined to discriminate against us and to treat us with little consideration. If we are not extremely careful we develop the much known "inferiority complex."

I will illustrate as follows: Not long ago a very desirable large town superintendency was open. I met the president of the board, a dentist. He immediately informed me that he felt I was competent to handle it in a first class manner and that he even felt I was better than most of the candidates but that they thought they must not hire anyone from a small place. He named several others, known to me, who are very good men and who were applicants. He said the same thing applied to them. A glance at the directory will show that the men in small towns ten years ago are still in towns about the size of those in which they started. This is detrimental both to the small town system and to the man.

III—The Superintendent and the Community

Some communities have keen and wholesome interest in the teachers working there and make their acquaintance early and do many things to make life pleasant for them. Others almost ignore them. I have worked where there was a deliberate attempt to have every teacher invited out to Sunday dinner the first Sunday of the school year and where every member of the faculty was invited to some home for holiday dinners, if in town. The men were included in the commercial club and all were invited to every social function, such as card clubs, etc. I have also lived in communities where in the space of three years not more than five or six homes ever extended an invitation to teachers. Girls have come to our house, almost in tears because they were so lonely, and the men have drifted into pool halls and have lost their real professional tone.

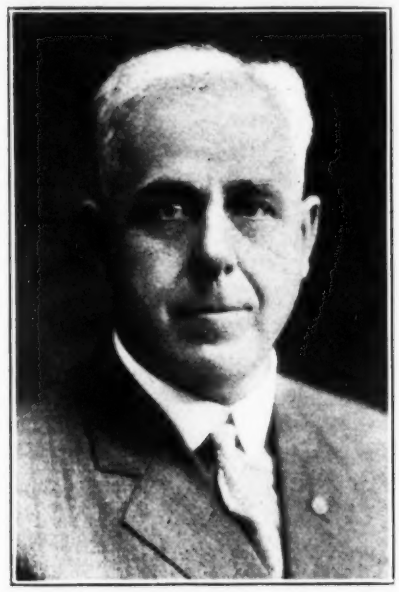
It is easy to see which community gets the most out of its teachers. Being human, teachers will act that way in spite of training. If they have made an honest attempt to take their place and have tried to work in church and have been rebuffed when they are new and lonely, they will drift away and eventually leave town. Some places they are, as one man told me, not expected to get out of the beaten path of the stranger for the first seven years. In other places all community life is automatically passed over to them and they are buried beneath it.

The superintendent has a difficult field if either of the above conditions prevails in the extreme. If he is not a part of the community he cannot do his best. If he is constantly handicapped by too much reserve or too much freedom and lack of real appreciation of his problem, he cannot bring the best results to the community. This assuming that he is himself an average man developed along social as well as professional lines.

IV—The Superintendent and the School

Coming directly to the school itself, any superintendent could figure it out if he knew the other three. The children who come to the school will be exactly what the homes of the community can be expected to produce. If the other three problems, taken in reverse order—the community, which includes the home, faculty, present and past, the previous superintendent—have all been what they should be, all things will go well. The children will know their place, things will be ready to start, teachers will cooperate, and a proper board will be chosen.

If all forces that tend to destroy the working of an institution are free to spend themselves within the school, he has a big task. I have taken over schools where it had previously been necessary to have two or three extra board meetings a month to decide quarrels between the superintendent and the teachers or pupils. The president of the board recently told me he was surprised that in my three years here only one teacher had been dropped and that there had never been a bit of friction. He said he could not understand it, saying previous to this not more than one or two teachers had been retained.



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State Superintendent of Public Instruction,
Lincoln, Nebr.
(See Page 103)

It must be decided early whether all enterprises that are being carried on, are the proper ones for the school and if proper whether effort and support are wisely proportioned. Having decided the habits of the community, the superintendent must make out his plans and work towards a definite end. He must know how far he can go in changing things and in inaugurating new moves.

Every school, regardless of how well it has been handled, has three fields that must be constantly improved upon. They are scholarship, morals, and social life, and, as a rule, come in about that order of importance. Under scholarship must come the effort to keep up good standards, to avoid getting into a rut educationally. Teachers must be awake, scholarly, prepared and willing to challenge the youth rather than to satisfy it.

Socially we will find the most extremes. Everything may be dancing or it may be athletics. It may be cards. It is not so much what it is as how it is handled. In some schools athletics is the tail that wags the dog. Money for it is taken from the textbook and lunch fund. It is merely a question of a successful team rather than a good school. Unless these unwise social customs are curbed, the small school may find itself without them in the readjustment problem.

It is not to be expected that communities will be much different from one year to another but in the space of four to eight or ten years they do change greatly. When the present depression passes, schools will be different than now when all the deterring forces are at work. However, these are vital problems and need the attention of boards and superintendents, not in conflict but in sympathy. This offers an excellent field for study and a fruitful field for work.

Bus Transportation Dangers

D. E. Wiedman, Bellingham, Wash.

In this day of traffic congestion and rapid increase in the number of motor vehicles, the problem of "safety" among school children becomes a more and more important problem. This is true not alone in the centers of population, but also in practically all rural districts, especially where children must traverse the public highways. Added to this problem has come the consolidation of school districts, with its attending problem of bus transportation for school children. This is the time that safety teaching should be a part of every school program, with especial emphasis placed upon the problem of safety relative to bus transportation. This teaching should include a number of various instructions to the children, which the following are most important:

1. Instruction should be given relative to safety while collecting at the designated "stops" of the bus. Traffic regulation requires that pedestrians walk against the traffic. This should be followed by the children, and if it is necessary to cross the public highway to the "stop" place, the pupil should come to a full stop and look both ways before crossing to the designated spot. Much of the dangers are attendant upon pedestrian traffic upon the highways and intensive instruction relative to this should be given the children.

2. Crowding in getting on the bus is a source of danger and should be an item of instruction and regulation. Children are prone to stand close to the edge of the pavement and to vie with each other in an effort to be "first on the bus." This is liable to result in pushing, with the probability that some child may be shoved forward and thrown into the path of the oncoming bus.

3. The dangers of projecting arms, heads, legs, and other portions of the body constitute still another item and the bus regulations should include positive instruction that no portion of the child's body shall be outside the bus. If the bus is equipped with windows, these windows should be guarded with definite rail bars to prevent exposure on the part of the children.

4. Shoving, pushing, and jostling while in the bus constitute another danger and should be guarded against. These acts on the part of the pupils, combined with the motion of the bus, especially in crowded conditions, constitute a source of physical injury as well as great inconvenience to the pupils while in transit.

5. The crossing of railroad tracks, street car tracks, and through traffic highways is still another source of danger. Although this is covered in part by the state traffic regulations, great care should be taken to employ only competent, careful drivers who have had definite instruction to come to a full stop before crossing railways, or entering upon through traffic highways.

6. Perhaps the greatest danger attends the unloading of children returning home at the close of the afternoon session. "School is out," release has come from the day's duties, exuberance is present and the urge of energy with it increases the danger. Groups of children unloading from the bus should be taught to descend and remain at the side of the highway until the school bus has driven away far enough to give a clear vision of traffic before the children cross or begin to travel upon the highway. Although there is no regulation which can compel traffic upon the highway to cease while children are being unloaded, it greatly lessens the danger if each school bus should carry printed signs upon the front and rear of the bus such as the ones used in our district, reading thus:

"SCHOOL BUS, PASS CAREFULLY"

This article is written to impress upon the minds of teachers, bus drivers, and principals the dangers attending bus transportation and the importance of instruction in safety, especially regarding transportation of school children.

The Problem of State Sources of School Revenue

I—Traditional State Sources

Fletcher Harper Swift, Berkeley, Calif.

The States Must Solve the Problem

Out of every $100 provided for public schools in the United States during the year 1924, approximately $17 came from state funds, $10 from county funds, and $73 from local funds. In some states the local unit is the town. In Louisiana it is the parish (county). But in the great majority of our states it is the school district. It is not the purpose of the present article to point out the evils resulting from the district system. This has been done by every thoughtful student of school administration and every farseeing educational leader since the days of Horace Mann to the present time. It has been shown that no matter how much school revenues, school burdens, and educational opportunities may be equalized by substituting for the school district some larger unit, such as the county, no great progress toward equalization can ever be made until the individual states assume whatever degree of responsibility is necessary for evening out existing inequalities. There is little reason for believing that in the immediate future the national government can be expected to solve the educational difficulties of the states. At the present time, therefore, we would seem to be justified in asserting that the solution must come from the states themselves.

From the standpoint of the state the remedy is two-fold: 1. Vastly increased school revenues must be provided. 2. The antiquated, unscientific, and unjust methods of apportioning state aid now employed by the majority of our states must be supplanted by methods of apportionment based upon sound political, economic, and educational principles. Although recognizing that this second phase of the remedy is fully as important as the first, it is necessary to limit present consideration to the question: from what sources shall our states derive their school funds? It is the author's purpose in the present article to consider those sources of school revenue which have been in the past and are still most commonly employed for providing state school funds. In a subsequent article he will give an account of certain newer types of state school taxes and show the extent to which they are being utilized.

Three Major Sources of State School Revenue

Taking the United States as a whole, three sources exceed all others in importance as producers of state school funds, namely, permanent state public school endowments, appropriations, and taxes. In 1924 out of every $100 provided for public schools, $17.10 was furnished by state funds. Of this $17.10, taxes and appropriations provided $16.30; state permanent school funds, together with all state miscellaneous sources, furnished only $0.80.

As might be expected, our states vary greatly as to the sources which they employ for providing state revenues and as to the extent to which any particular type of source is used. Some states levy no state school tax. Others make little use of appropriations. Still others make little use of permanent funds. How widely the relative importance of these three classes of funds varies from state to state may be easily shown. In 1921, about 24 per cent of the entire revenue furnished by state funds in Minnesota was derived from the income of the state permanent school fund. In the same year Massachusetts derived only 6%, and Tennessee only 5% of all state school moneys from the income of permanent funds. Again, in the year under consideration, taxes and appropriations provided approximately 76% of state school funds in Minnesota, 94% in Massachusetts, and 95% in Tennessee. It should perhaps be emphasized that these percentages refer to the proportion of the revenues furnished by the state alone and not to the total school revenue derived from both state and local sources. From this preliminary discussion of these three major sources we may now turn to a somewhat more detailed consideration of each.

State Permanent School Funds

Of all sources of state aid, permanent school funds are the oldest and most universally employed. In 1920 only twenty states levied a general property mill tax for general educational purposes, and several states, until comparatively recent times, have pursued no continuing policy of making appropriations for public schools. Contrast with this situation the fact that everyone of our 48 states with the exception of Georgia possesses one or more public school endowments, or maintains, in lieu of such endowments, permanent state accounts or debts on which the state pays interest to the schools. In view of our ultimate purpose, namely, the determination of the sources to which our states may in the future look for school revenue, it follows that two questions must be considered in connection with state permanent school funds: 1. Their present condition and importance; 2, the possibility of depending upon such funds for meeting present and future demands for greatly increased school revenues.

A comparatively recent study by the author of the condition of state permanent school funds revealed many significant facts. Fifteen per cent of the permanent school fund of Nevada, 18% of the perpetual school fund of California, and 32% of the Wisconsin permanent school fund exist as state debts. All of Louisiana's surplus revenue fund and 58% of her free school fund are recognized as permanent debts by her constitution. The principal of the so-called permanent state school fund is practically a state debt in all of the following states: Alabama, Arkansas, Illinois, Maine, Michigan, Mississippi, New Hampshire, Ohio, and Tennessee. In 1924 just 37 states possessed one or more productive permanent school funds. In only 4 of these states, namely, Wyoming, New Mexico, North Dakota, and South Dakota, did the fund contribute more than 10% of the total public school receipts, and in 16 of the 37 states less than 1% of the total school receipts was derived from state permanent funds.

It is not only true that in the United States today the percentage of total public school receipts derived from permanent funds is small, but what is more significant is the fact that this percentage has steadily declined. In 1918 only 5 of the 37 states under consideration derived less than 1% of their total school revenue from permanent funds. In 1924 the number had increased to 16. Again, the largest percentage of its total school receipts which any state derived from permanent funds in 1924 was 12.6%, in Wyoming, whereas in 1918 Nevada and Minnesota each derived approximately 20% and Wyoming 24%. In 1890, of the total receipts for public schools in the United States, permanent school funds and lands provided 5.5%, in 1924 they provided 1.5%.

A consideration of the facts presented in the immediately preceding paragraphs will inevitably lead to the conviction that it would be folly to look to state permanent school funds for the large increase in school revenues which must be provided if the state is to even out the existing inequalities. There are at least two additional reasons why it would be unwarrantable to hope to build up public endowments vast enough to meet the increasing financial needs of the schools. In the first place the natural resources from which such funds have been and might be derived, especially state lands, have been largely sold or exhausted. In the second place, in a period such as the present when the schools are threatened with financial shortage, neither state legislatures nor the public will be inclined to devote large additional revenues to the principal of permanently invested funds bearing a small rate of interest. On the contrary, the tendency will be to devote to current school funds any large additional revenues available for schools. If the states may not hope to provide increased revenues through the rapid building up of large permanent school endowment funds, they must look either to state appropriations or to taxation.

Appropriations

It has been already noted that in 1924 state funds furnished $17.10 out of every $100 provided for public schools in the United States and that out of this $17.10, $16.30 came from state taxation and appropriations. Not only does the state tax furnish a smaller proportion of the total revenue provided for schools, but as a method of finance it is much less widely used than the state appropriation. Whereas 15 states levied no state school tax in 1924, every state in the union made appropriations for schools. How widely states differ with respect to the extent to which they employ appropriations as a means of providing school funds may be seen from a comparison of the policies of Colorado and Minnesota. The only public school appropriation which Colorado makes is that necessary to entitle the state to its share of the Smith-Hughes fund and to pay the costs of administering this fund. Minnesota makes special appropriations for no less than twenty classes of school projects.

State school appropriations are frequently drawn from a state general fund largely composed of the proceeds of state taxes. It is consequently impossible to determine accurately how much of the revenue reported as derived from appropriations should, from the standpoint of origin, be classified as proceeds of taxes. The distinction becomes especially difficult in the case of a number of states which pursue policies similar to those of California. California appropriates from the state general fund $30 for each school child in state average daily attendance. She levies no state school tax; but more than 50% of her state general fund is derived from the proceeds of state corporation taxes. Moreover, the constitution specifies that public schools shall have the first claim on the proceeds of corporation taxes and inheritance taxes, all of which are paid into the state general fund.

Taxes versus Appropriations

However difficult it may be to distinguish between appropriations and the proceeds of taxation when viewed from the standpoint of origin, the fact remains that from the standpoint of methods of financing schools these two funds represent widely different principles. Appropriations leave it to each succeeding legislature to determine not only how much money shall be provided but just what educational projects shall be financed by the state. This results in putting into the hands of laymen not merely the power of promoting or blocking educational

policies, but the power of determining new lines of educational development.

Again, as a result of appropriations, the interests of the schools may fall victim to political jobbery and log-rolling. Furthermore, appropriations, instead of enabling school authorities to foster and elevate the system as a whole, frequently compel them to expend a large proportion of state school revenues on special projects, often determined, not by the needs of the children in the schools, but by the special interests of some dominant political group. For example in a state which is largely agricultural, extravagant appropriations for agricultural education have been secured, whereas requests for appropriations for physical education have been refused. The folly of such procedure is little short of tragic in the face of the well established fact that the country children of this particular state are less healthy and well developed than the children in the cities.

A state tax, in contrast with state appropriations, provides a stable revenue which can be estimated in advance. One of the most important advantages of the state school tax is that, as the population and costs of education increase, the wealth of the state also increases and consequently the revenue derived from the state school tax. Again, the proceeds of a state school tax are commonly credited to some general school fund which may be used for all lawful objects of school expenditure. As a result such a fund is much broader in its influence than funds provided for specified objects. This distinction, of course, does not apply where appropriations are devoted to some general fund as in the case of California already cited.

As most commonly levied the state school tax is a general property tax of fixed rate. A very serious objection to such a tax is that there is no guarantee that it will produce the amount of money which the state ought to provide. This difficulty may, however, be avoided if, instead of fixing a definite rate, the laws provide for the levying of a tax sufficient to produce a total amount or a specified amount per pupil, or better yet, sufficient to enable the state to fulfill all its obligations to the schools. Such methods are employed by Arizona, New Hampshire, Utah, and Washington.

Whether or not state school funds in the future will be provided by levying taxes or by providing appropriations, the fact remains that the major portion of the funds from which appropriations are made and will be made must, in the last analysis, come from state taxes of one kind or another. It follows that the all important question of school finance as far as state sources of revenue are concerned is the question of the state school tax to which attention will now be turned.

State School Taxes

How many states at the present time levy a state school tax? The answer to this question will depend upon whether we include states such as California, New York, and Illinois which derive a very large proportion of their school funds from taxes which are not levied specifically as school taxes but which are nevertheless levied with a very evident purpose of providing school revenue. If we add to our group states such as Michigan and Maine which levy a state tax to pay the interest on the state's debt to permanent school funds, the number will be still further enlarged. In view of the purpose of the present account it seems necessary to include both groups of states. Accepting these bases we find that at the present time no less than 33 states levy state taxes to provide revenue for public schools. Table I shows the 33 states depending upon state taxes for public school revenues and the fifteen states which do not.

TABLE I
Present Status of the State School Tax in the United States

33 States Devoting a State Tax to Schools

North Atlantic	South Atlantic	South Central	North Central	Western
1. Maine	1. Delaware	1. Alabama	1. Illinois	1. Arizona
2. Massachusetts	2. Florida	2. Arkansas	2. Indiana	2. California
3. New Hampshire	3. Georgia	3. Kentucky	3. Michigan	3. Nevada
4. New Jersey	4. Maryland	4. Louisiana	4. Minnesota	4. New Mexico
5. New York	5. North Carolina	5. Tennessee	5. North Dakota	5. Utah
6. Vermont	6. Virginia	6. Texas	6. Ohio	6. Washington
	7. West Virginia		7. Wisconsin	7. Wyoming

15 States Not Devoting Any State Tax to Schools

1. Connecticut	1. South Carolina	1. Mississippi	1. Iowa	1. Colorado
2. Pennsylvania		2. Oklahoma	2. Kansas	2. Idaho
3. Rhode Island			3. Missouri	3. Montana
			4. Nebraska	4. Oregon
			5. South Dakota	

Table I includes all states that levy state taxes for schools whether these taxes be general property taxes or some other type of state tax. Among the types of state taxes employed to provide school revenues are, in addition to the general property tax, corporation, income, inheritance, occupation, severance, poll, and certain miscellaneous taxes. The present article will confine its attention to the general property tax and the poll tax, two of the oldest types of taxation, reserving for treatment in a subsequent article the remaining types of taxes just named.

The General Property Tax

There are no less than four ways in which a state may levy a general property tax for schools: First, a tax of a specified rate may be levied on all real and personal property, the proceeds of the same to be devoted to some general school fund; second, such a tax may be levied for some specified purpose; third, instead of fixing the rate the laws may provide for a levy of a general mill property tax of a rate sufficient in itself, or sufficient when added to certain other state funds to produce a fixed amount; fourth, a state may provide for the levying of special taxes with the proviso that all or a portion of the proceeds of the same may or shall be devoted to schools.

Some states levy a tax of a definite millage and then provide that a certain fraction of the proceeds of this total state tax shall be devoted to certain school projects. Thus Nevada provides for the levying of a state tax of 6.2 mills. Out of this total millage she sets aside 1.1 mills for public schools and .005 of a mill for the public school teachers' retirement fund. The remainder of this tax is devoted to other objects including the state university, the state farm bureau, and the state hospital for mental diseases. Kentucky levies a three mill state tax and a five mill state tax. She sets aside 20.7 thirtieths of the aggregate proceeds of these two taxes for the support of common schools. The remainder of the proceeds she devotes to a sinking fund for liquidating state bonds and to state institutions of higher learning.

Much commoner than the policies just described is that followed by Minnesota, Maine, Delaware, and many other states. These states levy a separate state general property tax specifically for schools. No less than 21 states now levy a tax of this character, with rates varying all the way from 0.15 mills, levied by Ohio, to five mills levied by Virginia. Table II shows the 21 states which levy such taxes and the rates which they employ.

Some states, in addition to a mill general property tax of specified rate; others in place of such a tax, provide for levying a state general property tax sufficient to produce a certain total sum or a certain specified amount per school child. In such cases the rate is left undetermined and varies from year to year with the assessed valuation of the property of the state. Michigan and Illinois both provide for levying a state tax of a rate sufficient to pay the annual interest due on the state's debt to their respective permanent public school funds. Illinois appropriates annually $8,000,000 for public schools and provides for the levying of a general property tax sufficient to produce this annual appropriation.

TABLE II
Status of the State General Property Tax of Fixed Rate as Levied for General School Purposes in Twenty-one States

Groups	No. of Mills	States
Group I—More than 4 mills..	5.00	Virginia
Group II—3 to 4 mills.....	3.50	Texas
		New Hampshire
	3.33	Maine
	3.00	Alabama
		Arkansas
		New Jersey
Group III—2 to 3 mills.....	2.75	Kentucky
	2.60	Delaware
	2.50	Louisiana
Group IV—1 to 2 mills.....	1.30	North Carolina
	1.10	Nevada
	1.00	Florida
		Minnesota
		Vermont
Group V—Less than 1 mill....	0.89	Maryland
	0.80	Tennessee
	0.70	Indiana, Wisconsin
	0.50	New Mexico
	0.15	Ohio

New Hampshire, Utah, and Washington each provide for the levying of a tax sufficient to produce a fixed amount per child as shown in Table III.

TABLE III
Status of the State School General Property Tax of Undetermined Rate

States	Basis of Annual Rates
Arizona	—Sufficient to provide $25 for each child in average daily attendance, **in addition** to all moneys dedicated to public schools by the Enabling Act and the Constitution (e. g., permanent school fund).
Illinois	—Sufficient to pay interest on state's debt to surplus revenue fund, and school fund proper. Sufficient to pay annual appropriations provided in lieu of constitutional state two mill school tax.
Michigan	—Sufficient to pay interest due on state's debt to primary school fund, and swamp land fund.
New Hampshire	—District tax sufficient to pay to state $2 per child in district.
Utah	—Sufficient, when added to all other state school funds, to provide $25 for each school census child.
Washington	—Sufficient, when added to the income from the state permanent school fund, to provide $20 for each child of school age.

New Jersey, included in Table II, is in a class by itself and, strictly speaking, belongs neither in Table II nor Table III. It was included in Table II because the law provides that such a tax shall be levied on real and personal property as, when added to a state school appropriation of $100,000, will produce a sum equal to the proceeds of a state tax of 2.75 mills on all real and personal property. An analysis of the situation will show that in the case of New Jersey neither the rate nor the amount to be provided by taxation is determined in advance because the amount is not known until after the legislature makes is appropriation; and the rate is not fixed because it depends upon two other factors, the appropriation made by the legislature and changes in assessed valuation.

Widely different in purpose from the tax just described is a state mill general property tax levied for the benefit of some special type of training or some particular educational institution. This type of tax is levied by only a few states today and seems to be on the decline. Three states which levied such taxes in 1918, namely, Arkansas, Indiana, and Tennessee, have

discontinued this policy. Among the states which, at the present time, levy taxes of this type are Nevada, which levies a tax of .005 mills for the public school teachers' retirement fund; North Dakota, which levies a .2 mill tax for county, agricultural, and training schools; Utah, which levies a .2 mill tax for state high school aid; Wyoming, which levies a .125 mill tax for high-school-normal training.

Urgent Need for New Sources of School Revenue

Data available to every citizen in the United States show that today hundreds of thousands of children of school age are not in school; that thousands of teachers, from whom those who are in school are receiving their education, are being paid salaries so low as to make it impossible to secure even moderately trained instructors; that thousands of American children are housed in school buildings which we confess with shame are provided with no toilet facilities except the bushes by the roadside, and which cannot be described by any more exalted terms than dismal shanties or dark and unwholesome hovels.

Let us not delude ourselves into thinking that the financial crisis confronting the public schools of America is limited to poor rural districts. The writer of the present article has frequently called attention to the fact that in North Little Rock, Arkansas, the second largest city in the state, not a single public school was open even one day in the year 1920. A recent issue of *School and Society* (Vol. 24, p. 515, October 23, 1926) states that the New York *Herald-Tribune* "reports that the public schools of Atlanta, Georgia, may be forced to close for the rest of 1926, unless a plan is successful in raising $500,000 to cover the cost of operation. The revenue is exhausted and the salaries of teachers for September have not been paid. The teachers have remained on duty, however, as the mayor, members of the city council, and business men have sought to adopt a plan to raise the needed revenue. The banks for the last several years have been lending the city sufficient money to tide the schools over and each year have issued warnings that they would not continue to do so. The Atlanta Clearing-House Association, which includes the five largest banks in the city, has refused to lend the money to the city or the schools on a moral pledge from the city council that the funds would be repaid in 1927. The banks also have refused to lend money against certificates of salaries which were planned to give teachers in lieu of money."

That the situation just described is not limited to any one state or any one section of the country may easily be ascertained. THE AMERICAN SCHOOL BOARD JOURNAL of November, 1926, in an editorial (page 68) refers to the proposal of a member of the Chicago Board of Education. "For the adoption of 'a drastic method of economy by shutting down on all school activities of all kinds long enough to effect the necessary saving.'" The editorial continues, "it would be a novel spectacle to see a great American city, powerful in commerce, industry, and finance, close its school doors in order to awaken its constituency to its own duty in the direction of adequate monetary support."

In the face of the conditions just described and the necessity of providing greatly increased revenues to meet these conditions the question at once arises, how shall the necessary funds be secured? The most natural answer, in view of traditional policies, is by increasing general property taxes. The general property tax is one of the oldest types of taxation. It is the tax most widely used as a means of providing school revenue at the present time. In some states, such as Illinois, it is the sole type of tax employed alike by the state and by local communities for raising school funds. It should, therefore, receive our first consideration.

Incurable Evils of the General Property Tax

As administered today, the general property tax is a social and economic scourge which is striking at the foundations of the American home and American agricultural life. Tax rates have been so increased and have become so burdensome in many communities that multitudes of small house owners have been forced, or have preferred, to sell their homes. Families which formerly dwelt in detached dwellings with all the wholesome surroundings that this implies, now seek refuge and irresponsibility in rented houses, in flats, or in apartments erected for commercial gain. Farmers and ranchers, forced to pay high taxes year after year when the proceeds of their products have not paid for the harvesting, are flocking into villages, towns, and cities, and leaving vast tracts of fertile soil untilled and unsought. The general property tax has long been condemned by all authorities in the field of taxation as the most unscientific, the most inequitable, and most disastrous tax in existence. A few of the verdicts passed upon the general property tax may well be called to mind at this point.

Professor Edwin R. A. Seligman, of Columbia University, in his volume "Essays in Taxation," page 62, writes: "Practically the general property tax, as actually administered is, beyond all doubt, one of the worst taxes known in the civilized world. Because of its attempt to tax intangible as well as tangible things, it sins against the cardinal rules of uniformity, of equality and universality of taxation. It puts a premium on dishonesty and debauches the public conscience; it reduces deception to a system and makes a science of knavery; it presses hardest on those least able to pay; it imposes double taxation on one hand and grants entire immunity to the next. In short, the general property tax is so flagrantly inequitable, that its retention can be explained only through ignorance or inertia."

The special tax commission of the state of Georgia, in 1919, stated in its report to the governor that: "The commission, after its investigation, believes that the system now in use is a failure (i. e., the general property tax) and concludes by recommending an amendment to the constitution that would permit the levying of taxes on incomes, inheritances, privileges, and occupations, which classes of taxes may be graduated, and when levied may contain provisions for reasonable exemptions."

The Georgia commission adduces the following reasons in support of the proposed amendment: "We have reached the above conclusion because we find that the provision of our law requiring property of every kind and character to be taxed at the same rate is condemned by—

"1. Practically all students of the science of taxation.

"2. Practically all of the heads of Federal and State tax departments.

"3. Practically all of the more than 100 special tax commissions.

"4. The United States Supreme Court.

"5. The National Tax Association.

"6. The experience of Europe, England, and our own States, all of whom have tried it, and about half of whom have so modified it as to adapt it to modern conditions."

The Tax Commission of Ohio, after fifteen months' investigation of the general property tax, summarized its findings in the following statement of facts: 1. It punishes the honest. 2. It rewards the dishonest. 3. It results frequently in double taxation. 4. It is unjust to the owners of all other property. 5. It lowers the standard of integrity.

Assessment Evils

Inequalities and dishonesty in assessment are among the outstanding defects and evils commonly accompanying the general property tax. The constitution or laws of many states provide that property shall be assessed at its true value, yet in the face of such provisions, property is assessed at all the way from 100 per cent in such states as Massachusetts and New Hampshire, to 20 per cent in Arkansas and 15 per cent in Iowa. The laws of Georgia and Illinois require that property be assessed at its true market value yet we learn from the report of the Bureau of the Census that property is assessed at 35 per cent of its true value in Georgia and at 30 per cent in Illinois. A study of true and assessed valuations of property in Alabama made a number of years ago showed that between 1880 and 1918 property had been assessed all the way from 54 to 22 per cent of its true value. A federal educational commission in its report published in 1919 noted a few of the many flagrant violations of the tax law in relation to the assessment of property in the following words: "The survey commission's attention has been called to many instances of flagrant abuse of the tax law, chiefly in relation to assessment of values. Coal and iron lands that are bonded for millions of dollars are known to have been assessed as agricultural lands at the paltry valuation of a few thousand dollars. Farms that were recently sold at a good price are listed on the tax books at less than one tenth of this value. Such cases, unfortunately, are not isolated instances of a vicious practice, but are part of a common system."

Table IV shows the reported bases of assessment of real property in 45 states in 1924. The bases reported are taken from the Bureau of the Census, "Financial Statistics of the States, 1925," except in the case of Tennessee and Utah which will be explained later.

TABLE IV
Basis of Assessment of Real Property in 45 States, 1924
Reported Basis of Assessment in Practice (Per Cent of Estimated True Value)

Per Cent	No. of States	States
100	15	Arizona, Colorado, Connecticut, Delaware, Indiana, Kansas, Louisiana, Maine, Maryland, Massachusetts, Michigan, New Hampshire, Ohio, West Virginia, Wisconsin.
88	1	New York.
80	3	Kentucky, Missouri, South Dakota.
75	1	Rhode Island.
73	1	Oregon.
70	3	Nebraska, Mississippi, Wyoming.
65	1	Vermont.
60	5	Alabama, Nevada, New Mexico, North Dakota, Oklahoma.
55	1	Utah.
53	1	New Jersey.
50	3	Florida, Idaho, Texas.
43	1	Washington.
40	1	Virginia.
38	2	Minnesota, Tennessee (1915).
35	1	Georgia.
30	2	Illinois, Montana.
25	1	South Carolina.
20	1	Arkansas.
15	1	Iowa.

Unfortunately, it is impossible to verify the bases reported by the Bureau of the Census and presented in Table IV. Considerable doubt is cast upon its accuracy by facts ascertained from other sources in connection with Tennessee and Utah. According to the Bureau of the Census' document already cited, real property in both these states is assessed at 100 per cent of its true value. As explained later in the present article, real property in Utah is assessed at from 39 to 75 per cent of its true value, the state average being 55 per cent. And the *Biennial Report* of the State Tax Commissioner of Tennessee, 1921-22, pp. 30-31, informs us that property is assessed at all the way from 7 per cent to 85 per cent of its true value in one county and in another from 10 per cent to 125 per cent. This same report indicates that the higher the valuation the lower is the percentage of assessment: "In every county in the state, property valued at $2,000 to $10,000 was assessed lower; property valued from $10,000 to $25,000 still lower; and property valued above $25,000 was assessed lowest." It is evident that in Tennessee assessments are made in such a manner as to favor the wealthier property owners and the wealthier the owner the lower is his assessment.

(Continued on Page 144)

Supervision

H. D. Fillers, Superintendent of Schools, Corsicana, Texas

In most of the leading countries of the world teaching is a profession marked as permanent. The changes due to resignation or to dismissal are relatively few. This is not the case in the United States. Here the annual turnover is greater than in any other calling. This change of personnel amounts in many sections to 20%, 30%, or even 40% of the total number engaged in the work of classroom instruction. Filling vacancies in the teaching corps with a large per cent of inexperienced young women with inadequate or superficial training, presents many serious problems to the administrative staffs of our schools. For this situation growth and training in service are the remedies that are now known. An efficient program of supervision of instruction is the only means of safeguarding the quality of teaching in the classrooms. The facts as sketched are recognized in every quarter. The program of supervision must be outlined in sufficient clearness to be understood, accepted, and put into action. Superintendents should agree on at least three aspects of the problem:

1. The principles on which supervision is based.
2. The activities of supervisory officers.
3. The outcomes of supervision.

The principles of supervision form the basis of the analysis of supervisory activities. Here are listed some of the most important which should be evident in any working program in the schools.

Principles of Supervision

It is the function of supervision to improve instruction.

a. Supervision must be cooperative rather than critical.

b. The best supervision provides for the professional growth of the teacher.

c. Supervision should interpret the curriculum in terms of activities of the pupils.

d. Supervision analyzes teaching and suggests possible means of improvement.

e. Supervision calls for the judgment of the quality of instruction.

f. It is the function of supervision to participate actively in curriculum construction.

g. The methods used in teaching should have the endorsement of supervision. There is more than one way to do good teaching.

h. Supervision must express itself in a constructive program.

i. The highest test of supervision is the spontaneous or voluntary conference between teacher and supervisor.

These principles imply that supervision is stamped with a spirit—the spirit of the human touch, growth, change, life. Teachers want to do. This elementary urge must be given a chance to color and to filtrate through all the plans of supervision.

In our American cities of more than 15,000 population, we now have at least three supervisory officers, the superintendent, the supervisor, and the principal. The supervisory program is set up, projected, and translated into a reality by them. These officers must understand exactly what the program is, how it is to be interpreted, and the relationships involved. The very close cooperation demanded presents a highly important practical problem of administration which devolves on the superintendent of schools in his capacity of organizer. He will work out with the aid of the principal and supervisor the plans of work for each. Each will be the chief in dealing with some problems of instruction. In cases of overlapping, they will be instructed to confer with the superintendent of schools. Perhaps one will supervise teachers of reading, the other will supervise the teachers of arithmetic. The principal may supervise routine matters of handling classes, the supervisor will never interfere. This much is said in order to make the position very clear that the administration of supervision must make plans that will help all factors in supervision to function with rhythm. The job in a small city is too big for one. In a medium sized city three or four skilled supervisors will be welcomed by the teachers. Supervision that helps does not have any opposition from growing teachers.

Activities

In a city of 5,000 the superintendent will perform many of the activities which are listed below. In the larger cities, he will deal only with the setting up of the supervisory program. In such case the principal and the supervisor will initiate the activities suggested here. Neither of the lists is presumed to be complete. They are presented in the hope that stimulation of supervision may result.

Supervisory Activities of the Superintendent of Schools[1]

1. Assist the teachers in finding the specific aims and objectives to be attained in each subject at each grade level.

2. Aid the teachers in interpreting the courses of study offered in the schools and in the written formulation of the methods by which these courses may be made to function.

3. Encourage the educational growth and increase in teaching efficiency of the classroom teachers by teachers' meetings with specific purposes, bulletins, books on special methods of teaching particular subjects, giving standard tests and reporting the results to the teachers, and suggesting methods of procedure for improvement of weak points.

4. Visit the classroom teacher at work taking a lively and sympathetic interest in what is being done, following this with a personal conference with the teacher. If possible, the teachers should be encouraged to take the initiative in asking for these conferences. Arrange for each teacher in the system to have a visiting day which is preceded and followed by conferences with the superintendent.

5. Help the teachers in making a school progress study of every child in the school system.

6. Study with the teachers the question of failure of all pupils in their classes and work out a list of remedies which may be employed to prevent failure.

7. Encourage teachers in undertaking new experiments. Let all the teaching force feel that new ideas are welcomed from any source whatever.

8. Attend the meetings of state and national organizations for the purpose of gathering new ideas and ideals for the school system.

9. Analyze any teaching difficulty so fairly and so clearly that the teacher will know that the suggestion which is made for improvement is sensible and practicable.

10. Let the superintendent cultivate habits of industry and enthusiasm, thus giving stimulating power to his personality so that his spirit may be felt as a positive force by every child in the school system.

11. Be able to evaluate school work, recognize merit, and give due praise for work well done.

12. Ask principals to write out definite objectives at the beginning of the term and require a report at the close of the term indicating how many of these objectives have been attained.

13. Get out letters to teachers and principals, making definite statements of school policies, and in supervisory work see whether or not these policies are being carried out.

14. Systematize supervisory visits, making a definite study at one time of the work that is being done in one subject. Make written or oral reports to teachers on the subject, or better, call a conference of these teachers after a survey in one subject has been completed.

Supervisor's Activities

1. Help the teachers in the interpretation of the courses of study to the end that the classroom teaching may contribute to the attainment of the ideals set up for the school system.

2. Demonstrate classroom teaching of the type desired.

3. Hold individual and group conferences for the purpose of improving the efficiency of instruction. All such conferences should be constructive rather than critical.

4. Make specific constructive suggestions—book references, periodical articles, etc.—so that the teacher may see and know what to do, what to expect and what attainments may result.

5. Give tests and compare results with standard norms.

6. Rate the work of teachers from the point of view of pupil achievement.

7. Set up standards of classrooom attention, encouraging the attainment of the goal by getting every pupil to focus as a group-unit.

8. Outline with the aid of the teachers the units to be taught in each half-grade. Suggest references that bear on the teaching of these units.

9. Encourage the use of common teaching devices—blackboards, pictures, illustrative materials, etc.

10. Judge the success of the teachers by standards that are impersonal, objective, uniform, and fair.

11. Be a helping teacher rather than an inspector.

12. Aim to develop in the teachers the habits of self-analysis and self-criticism.

13. Assist in setting up definite goals of achievement for the different grade levels.

14. Co-operate with building principals in all activities.

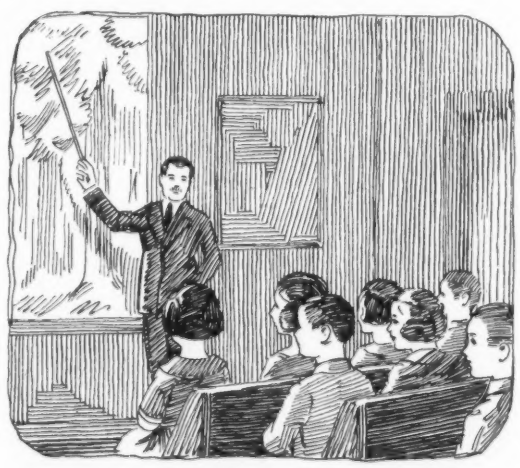
15. Encourage professional growth and advancement of teachers, being ready at all times to help teachers with capacity in their efforts to obtain positions of greater responsibility.

16. Be helpful by being fair and considerate as well as by being efficient.

Supervisory Activities of the Principal

1. Encourage conferences with teachers on problems of classroom teaching.

[1]The remainder of this article was compiled by the Research Committee of the Section of Superintendence of the Texas State Teachers' Association composed of: Dr. B. F. Pittenger, University of Texas; Professor H. H. J. Fling, East Texas State Teachers' College; Superintendent G. O. Clough, Tyler; District Superintendent Julius Dorsey, Dallas; and H. D. Fillers, Corsicana, Chairman of the Committee.



2. Give particular attention to the routine matters of classroom teaching—passing of materials, use of blackboard, care of equipment, etc., as these are related to instruction.

3. Be instrumental in arousing the interest of teachers in membership in associations of teachers, in reading recent books dealing with the technique of methods, in the analysis of their own teaching procedures.

4. Visit classroom teachers frequently following such visits with tactful but helpful suggestions; or sometimes go for the purpose of picking up an idea which can be passed on to some other teacher.

5. Stimulate the efforts of a teacher by having her visit another teacher in the system doing the same work.

6. Give tests two or three times a year so that the results may be compared as between grades and as between buildings. At least once each year these tests should be standard achievement tests.

7. Plan the work of the supervisor of subjects prior to her visit to the building, thus being enabled to profit most from such visit.

8. Rate each teacher in instruction, housekeeping, discipline, co-operation, etc., eight or ten times during the year.

9. Have frequent conferences with teachers concerning individual pupils, thus showing a definite interest in the needs of many. Suggest plans for adapting instruction to the individual differences thus discovered.

10. Assist a teacher by taking charge of the work of a class for several days at a time when thoroughly competent to make a demonstration of the work in line with modern methods in the subject being taught.

11. Plan to utilize the services of the superintendent to the best advantage by making a list of weaknesses in the matter of instruction of teachers prior to his visit.

12. Assist the teacher in formulating definite goals of achievement in certain subjects.

13. In all matters of supervision, deal with parents and teachers personally as much as possible, and not over the telephone or in writing.

14. Encourage teachers by giving due praise for work well done.

15. Give to the public and the patrons information concerning any teacher who is responsible for a definite project of school work which may receive special attention.

16. Assist teachers in making a school progress study of every child in the building.

17. Utilize every means possible to encourage teachers to try new experiments; in other words, try to do the old things in a new way. Stimulate research.

18. Take every means possible to inspire and encourage teachers to keep in touch with educational progress, especially in line with the subjects which they are teaching.

Outcomes

The following results of supervision may be expected as reasonable outcomes if the program is well planned.

1. A measurable growth in knowledge, skills, attitudes, and appreciations on the part of the children.

2. Professional growth of the teachers as revealed in interest in and attitude toward the work.

3. A co-ordination of the work in the school system at every grade level, and a unity of purpose and plan running through all from the first grade to last. The schools function as a unit.

4. A healthy interest in the schools on the part of the citizens.

5. A distinctive school spirit based upon growing social contacts of school, home, and community.

6. A growth in morale of teachers and pupils.

7. School activities adjusted to the particular needs of boys and girls of varying needs and capacities.

8. A well organized and growing school curriculum, expressing itself in the experiences of the pupils and teachers.

9. Objective evidence of increased efficiency in all respects of teaching.

How Shall the Number of Attendance Officers in a Community be Determined and Selected

Henry J. Gideon, Director Bureau of Compulsory Education, Philadelphia, Pa.

Most of you have received communications from superintendents of schools, attendance officers, and other school officials throughout the country asking for data in regard to school enrollment and the number of officers in the attendance staff. The use of questionaries and letters of inquiry has been found necessary because there is no recognized standard method which can be used in determining the number of attendance officers required to properly serve the needs of a community. This League of Compulsory Education officials should go on record as favoring the adoption of a formula which may be used by a community to properly estimate the size of its corps of attendance officers.

The number of attendance officers to be employed is conditioned by the kind of service rendered. The enforcement of the attendance law and related school regulations demands a certain amount of routine work. Investigations and inquiries must necessarily be made and to some extent police functions must be exercised. This service, which is routine in character, is indispensable in the enforcement of the attendance law in a large community. If the attendance officers are required to perform only this routine work, a relatively smaller staff may be employed.

If, on the other hand, attendance officers are expected to serve as coordinating officials between the home and the school and to furnish educational social service, going deeply into the problems of the child in the family and the home, then a relatively much larger staff must be employed. The policy of school administrators should aim to develop in the attendance corps, a staff of welfare workers which will not only furnish to the parent a clearer explanation of the school matter immediately at hand, but will also give to parents the kind of help which will enable the children to get the maximum benefits from the public school service.

The Attendance Officer Load

In determining the number of attendance officers to be employed factors other than the number of children to be served must be considered. The area to be covered and the amount of travel necessary are quite important matters. The social level of the community and the general attitude of parents toward the schools must also be taken into consideration. Usually the higher the social intelligence and the better the attitude of the community toward the schools the less is the need for attendance service. Naturally the quality of the service rendered deteriorates when attendance officers are required to handle an excessive number of cases. No matter how intelligent and well trained they may be, a high quality of service cannot be maintained so long as the inadequacy of the staff necessitates the assignment of more work to each officer than can be properly done in the time available. The first step toward the improvement of the service should, therefore, be a reasonable limitation of the attendance officers' case load.

The proper method of determining the size of the attendance corps is based on the use of a ratio. This principle has been used for many years in organizing classes in schools and in determining the number of teachers to be appointed. Teachers in elementary grades in Philadelphia schools are required to have an average daily attendance of not less than 40 children and in the higher schools not less than 25 children. In special classes for the mentally, physically, or morally handicapped the average daily attendance of pupils per teacher ranges from 10 to 30 children, varying with the type of class and the number of classes in the organization. School regulations provide that, with increases in attendance additional teachers are automatically added to the staff in accordance with the foregoing ratios.

Just as there is a direct relationship between the number of teachers employed and the number of children to be taught, so also is there a relationship between the number of attendance officers to be appointed and the number of children to be served. In most communities attendance officers deal with children in both public and nonpublic schools; the number of children registered in the school census from 6 to 15 years of age, inclusive, should therefore be used as the basis of the ratio for determining the number of attendance officers to be employed. The age span of 6 to 15 years, inclusive, is suggested because the laws of most states fix 6 years as the age of beginners and 16 as the upper age limit of compulsory attendance. Using the total enumeration of the school census as the basis, what ratio shall be established for determining the number of attendance officers? Several years ago in London, the ratio was one attendance officer for each unit of 2,500 children reported in the annual scheduling. About the same time New York, Newark, and several other cities in the East reported a ratio of one attendance officer for each unit of 3,000 children. The assertion is not made that these cities have formal regulations for determining the number of attendance officers by the ratio method, but apparently they consider that the attendance officer should not be required to serve a larger unit.

Philadelphia does not have written regulations for determining the number of attendance officers. The board of public education, however, has, in practice, been guided by the use of a ratio in authorizing the appointment of attendance officers, as well as medical inspectors, school nurses, and school counselors. The public schools have one medical inspector and one school nurse for each unit of 3,000 children enrolled. School counselors in the junior and senior high schools are authorized according to a ratio of one counselor to each unit of 2,000 children enrolled. Counselors, however, spend part time in instruction.

Methods Employed in Philadelphia

The budget of 1926 for the school district of Philadelphia recognized the ratio of one attendance officer for each unit of 3,500 children reported in the annual school census. In the budget of 1927, the superintendent of schools has recommended the appointment of additional attendance officers sufficient in number to reduce the ratio to one officer to 3,250 children, and will probably recommend in the budget of 1928 additional appointments to the staff which will reduce the ratio to one officer for each unit of 2,000 children. The board of education has

(Continued on Page 148)

Note: Address read at the sixteenth annual convention of the National League of Compulsory Education Officials, October 26, 1926, at Nashville, Tennessee.

School Housekeeping

(Second Article)

M. S. Olsen, Director of Janitor-Engineer Training School,
Minneapolis Board of Education

PRESERVING THE FLOORS

Hardwood floors are in almost universal use in the school buildings of this country and to make them a good building investment, they must be preserved. Constant scrubbing serves to rob them of their natural oil and gum, and rapidly ruins them. Proper preservation and maintenance, on the other hand, will find them beautiful and serviceable long after the first cost of the building has been forgotten. Improper treatment can only result in unsatisfactory appearance, short life, heavy maintenance expense, and early refinishing or replacement.

Maple has become the popular hardwood choice for school floors because it is very hard, tough, and of close grain. My experiments, therefore, have been confined to maple and may, or may not, apply to open-grained woods or floors of any other material.

Preservative Materials

Floors can be protected in three ways: (1) By varnish or shellac; (2) by oiling; or (3) by waxing.

While varnish is a popular preservative for domestic floors, it has found so little favor in school buildings generally that it need not be discussed. School boards, in choosing a floor preservative are, therefore, narrowed down to either floor oil or wax.

At once, the question of cost arises, and in most instances, only the first cost is considered. Using standard products and wholesale prices, the first cost is as follows:

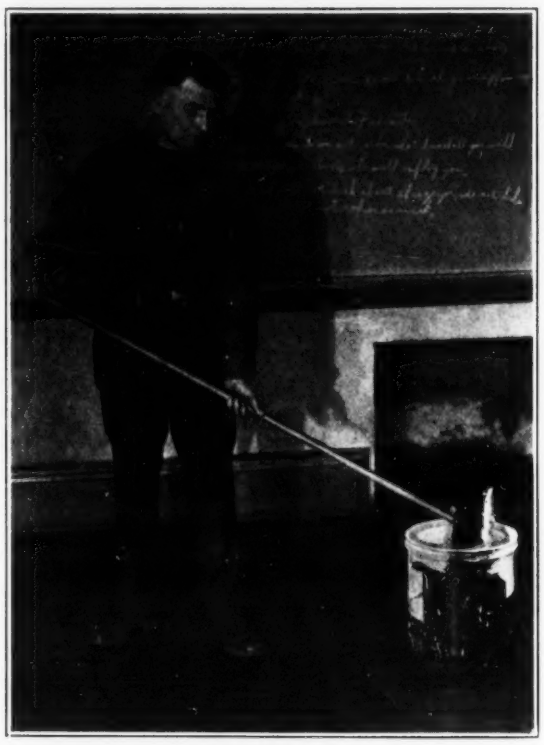


FIGURE 1.

Oiled floors require instruction, constant supervision, intelligent, interested, and energetic janitors, and daily attention. Too much depends upon the janitor. A building with oiled floors may be good today and bad tomorrow, for the simple reason that the janitor who knows how to handle oil is succeeded by one who knows little, or nothing, about what he is "up against."

Old, scrubbed floors are almost certain to turn black when first oiled. By skillful care and "thinning out" of future applications, they may or may not respond to the demand for lighter color.

Oiled floors are dustless, but so are oiled roads and for the same reason—both absorbing the dust from the air as well as the traffic dirt.

Floor oil is so commonly used in schools that all one can do is to point out some of the troubles encountered in its use and suggest a possible method for making oiled floors more pleasing to the eye, cleaner, and therefore more sanitary.

Wax as a Preservative

An architect writing of his years of experience with floors says, "A generous use of wax, and a thorough rub and polish, gave the old floors an excellent appearance. The pores of the wood were kept filled and the life-giving wax was replenished when needed. It convinced me, floor experts to the contrary, that every type of wood can be made into a sightly, easily-cared-for floor by similar treatment."

What is Wax?

Commercial floor wax is a combination of paraffin and carnauba wax. Carnauba wax comes from the palm trees of Brazil and is the hardest, most durable material used in the production of floor wax. All manufactured wax is liquid as it pours into its containers, one mixture cooling to paste form, due to a lesser per cent of liquid and greater per cent of body in its composition.

Are Waxed Floors Dustless?

Where floors are waxed, we note that the surface is perfectly dry, hard, oil-less, sweeps off easily, and does not hold the dust by any "stickiness." Yet, we may sweep with an ordinary floor brush without using any sweeping compound, and still not raise any dust.

Scientifically, the reason for this contradiction is simple. Wax is an electrical insulator. When rubbed (with cloth, brush, electric polisher, or merely shoe leather) it takes on a negative charge. The majority of dust, on the other hand, is composed of materials such as smoke (carbon) and sand (silicates) that carry a positive charge. Opposite electrical charges attract each other just as a magnet and a piece of iron. Dust, therefore, is pulled down to the wax. But they do not physically combine and the floor brush "slides" the dust off, without allowing it to rise.

Applying the Wax

Every floor should receive two coats of paste wax. It will then be noted that the floor absorbs much more wax for the first coat than for the second coat.

Floors must be clean before wax is applied. Old floors with oil in them should be scrubbed until the wood is positively free of oil. This can be easily determined by an inspection of the scrubbed floors two or three days after scrubbing. Should black spots appear, it is a certain indication that oil is still present and such floors must be scrubbed a second time. Two thorough scrubbings, with plenty of trisodium phosphate in hot water, will usually free the average oil-saturated floor of its oil. It is useless to apply wax before this is done for the wax will be attacked by the oil and the result will be a gummy, unsightly mess of a floor and decidedly not a properly preserved surface.

The application of wax is easier than oil. Schools usually purchase paste wax in 30-lb. tin containers, with covers which measure ten inches in diameter. The standard wax mop is eight inches wide so that it easily enters the container. Dipping the mop into the container, as shown in the first illustration, loads it up with whatever amount of wax may be desired.

A wax mop is made up of a proper length handle (short handles for short men, and long handles for tall men) and a clamp head which

(Continued on Page 133)

Covering Capacities of Materials

Standard Floor Oil	1 gallon covers 400 Sq. Ft.	Cost per Gal. .857	No. Coats Required 1	Cost per Sq. Ft. .0021
Standard Floor Wax	1 pound covers 300 Sq. Ft.	Cost per Lb. .36	No. Coats Required 2	Cost per Sq. Ft. .0024

Floor Oil as a Preservative

Floor oil is easy to apply. It is usually spread with an ordinary scrubbing mop. Some schools oil their floors three times a year—at Christmas, Easter, and summer vacations, while others may oil only once a year, during the summer vacation. One of the reasons for oiling in summer is that better results can be obtained when the weather is warm and floors are at the right temperature. Proper temperature assures a more rapid, thorough saturation, but at the same time, the janitor must work faster in order to achieve a uniform appearance.

Floor oil is hard to maintain. Oxidation begins the moment it is applied. By oxidation, we mean that floor oil combines chemically with the oxygen in the air. That is why an oiled floor inevitably darkens in spite of the best efforts of the janitor to maintain them at their original color. On old floors, even the original color is displeasing, often being almost black in appearance.

On new floors, best results in maintenance have been secured where the corridors are "run" twice a day and classrooms are swept once a day with a treated mop. The mop is usually loaded with a "thinned out" floor oil which serves to cut the daily surface accumulation, and restores the floor to its original appearance.

Taking into account the chemical truth that floor oils oxidize, and meeting this fact by a change in the usual method of sweeping, new floors can be kept in surprisingly good condition, with the possible exception of unused portions, one foot or so from every wall, where traffic does not assist the janitor in "cutting off" the surface accumulation and where it is apt to pile up and gradually take on a darker color than the used areas.

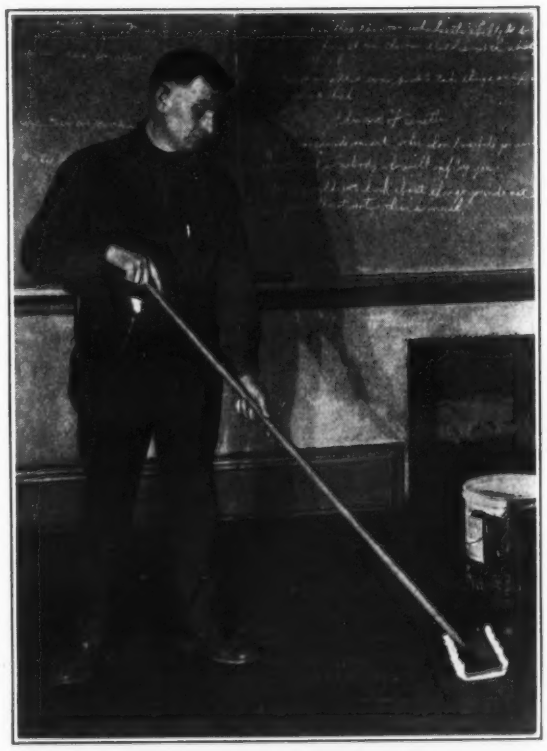


FIGURE 2.

Another Principal's Views on Intelligence Tests

R. O. Billett, High School Principal, Painesville, Ohio

What are intelligence tests, and what are they not? What can they do, and what can they not do? What honest-to-goodness, practical service, if any, can they render to real, bread-and-butter school administration and classroom procedure?

There are all manner of guesses at the answers to these questions. Guesses from honest schoolmen and teachers, range all the way from the fancy of the simple, gullible *uninformed* soul who concedes that intelligence tests are a panacea for all educational ills, down (or up) to the surmise of the wary, conservative, likewise *uninformed* spirit who sees intelligence tests as devilish machinations designed to enthrall the educational system.

"A hand-axe is an excellent tool but of no use for shaving purposes," said Josh Wise, paraphrasing Poor Richard of a century and a half ago. Some wit should devise similar advice for those who would make use of intelligence tests.

One enterprising principal seems to regard his mental tests as possessing the virtues of a pill. He is quoted as saying, "I have given all my pupils intelligence tests and I cannot see that it has done them any good."

Another principal says he cannot see the value of intelligence tests because "they do not measure all the qualities which make for success in life." Wonderful instruments these tests would be if they could do that! But, it is scarcely their function. It were easier to look into a measure of wheat and say which grains would grow and which would not.

Another administrator felt her testing program completed when she had informed all her pupils of their respective intelligence quotients, announcing which had the highest score, which the lowest, etc. Impossible? Not at all. It actually happened.

The Purpose of Intelligence Tests

Intelligence tests have uses, but surely the pupil is not the one to make application of the results. What good purpose is served by informing a pupil of his score? If he has a high score he becomes self-conceited. If he has a low score he may become discouraged. Intelligence test data should be confidential information for use of administrators and teachers only, and as a partial basis for a school program adapted to the individual differences of the children concerned.

All of which reminds us that education as a science is immature. Most educators look forward hopefully to the day when education shall be everywhere recognized as a science and teaching shall rank as a profession.

However, some educators who yearn exceedingly for this consummation overlook the self-evident fact that there can be no science without *measurement*—the more exact the measurement, the more exact the science. To him who truly desires the ushering in of the day of science in education, there is no more hopeful sign of the dawn than that furnished by the results of present-day intelligence tests, standardized educational tests, and the new informal, objective examination. The development of these instruments has made possible educational measurements which *supplement* teachers' judgments in an important way.

True, educational measurements are still crude. But, a crude form of measurement may serve practical purposes, so long as its limitations are recognized. Moreover, the only way to refine measurements is to use them. By this I mean use them under the practical conditions of the classroom and not merely in the ethereal atmosphere of the laboratory.

The Group Test of Mental Ability

The purpose of this article is to discuss briefly the present-day group test of mental ability, styled by some as a group test of "intelligence." I want to indicate in as few words as possible (1) what the group test of mental ability *is* and *is not;* (2) what the group test of mental ability *can do* and *cannot do;* (3) two practical uses to which the tests may be put in the process of improving classroom instruction.

Terman and Otis designate their tests as "group tests of mental ability." These tests are in no sense designed to measure "general" intelligence.

They are designed to measure "abstract verbal intelligence" or to put it in another way, to measure that type of mental ability which enables one to master material of an academic nature. Any test which measures such a trait has a place in good administration and classroom procedure where nine-tenths of the work, at least, is academic.

So far as "general" intelligence is concerned, let us admit at once that no one knows what it is. It probably consists of several factors. There may be a "mechanical" intelligence, a "social" intelligence, etc. If so, the best procedure would be to isolate each *type* of intelligence or each *factor* of intelligence and devise a test for measuring each. The present test of mental ability is a move in the right direction. There is a type of mental ability which enables the possessor to master material of an academic nature. This type of mental ability may be well-named "abstract verbal intelligence." The so-called group "intelligence" tests are designed to measure academic ability and not a vague "something" known as "general" intelligence.

Pupils Grouped on Basis of Academic Ability

By means of the group test of mental ability it is possible to divide a number of pupils into at least five groups, on the basis of academic ability: (1) The Very Superior; (2) Those Distinctly Above the Average; (3) The Average; (4) Those Distinctly Below the Average; (5) The Feeble-Minded, or Those Bordering on Feeble-Mindedness. No informed administrator, or teacher, expects the scores from group mental tests to be sufficiently accurate to enable him to *rank* his pupils, without error, 1, 2, 3, etc. The test at best can only indicate the group in which the pupil belongs. There will always be "border-line" cases. But, the teacher will be challenged to a more careful study of the individual child, a consummation devoutly to be wished.

Furthermore the administrator of mental tests knows that unusual physical or emotional conditions of the pupil on the day of the test may greatly affect the score and hence the intelligence quotient. This error is almost completely eliminated by administering a second form of the same test several days after the first test is given. The higher score may then be taken as the more reliable. The assumption, of course, is that no score honestly earned by the pupil can be an *overestimate* of his ability. The danger lies largely in under-estimation.

Admitting that present mental tests are crude, that they measure only the pupil's probable learning rate for academic material, that they are not so accurate as to be instruments for ranking pupils 1, 2, 3, etc., then what practical use may they serve? We do not pretend to have found all the possible uses for mental test scores and I. Q's. But, we are making two uses of the I. Q., which we feel repay us for the time required to administer and score the tests, and to tabulate the test results. These uses are (1) for homogeneous grouping of pupils and (2) to aid in the study, by the teachers, of individual pupils with a view to stimulating all pupils to work up to the limit of their native capacities.

Homogeneous Grouping of Pupils

For four years we have used mental tests at Painesville for the first purpose. For three years part of the work has been on an experimental basis. In this experimental work *all factors have been kept constant except the grouping factor.* The same teacher has been in charge of all the experimental groups throughout the entire three years. Each year two heterogeneous groups have been maintained as a check on the three homogeneous groups. Batteries of educational tests have been given at the beginning and close of each school year. All tests have been carefully scored and results handled by approved statistical methods. We have ample evidence of the value of homogeneous grouping by means of mental tests. *We also have ample evidence that teachers' marks are entirely undesirable as a basis for homogeneous grouping.* Since this evidence is being systematized for presentation for a master's thesis it cannot be given here. *The fundamental principle which the evidence tends to substantiate, however, is that homogeneous grouping should be made on a basis of those traits which are not subject to change through education.* When one stops to think about it this is a reasonable thing to believe, even without evidence, though the point seems to have been entirely overlooked by those who have written on the subject of homogeneous grouping. At present we are able to measure with considerable accuracy one of these traits which are probably unchangeable through education. This trait is "abstract verbal intelligence" measured by means of the useful mental (intelligence) test. The mental test is probably the only measuring device, now developed, for measuring an unchangeable trait. Composite scores of mental tests and teachers' marks or ratings should probably never be used because teachers' marks or ratings are largely a measure of *changeable* traits many of which it is the very purpose of education to change. Many traits are included in teachers' marks. Some of them are, no doubt, courtesy, tact, and personal appearance. But, the most important, is probably *effort.* As much as anything else, teachers' marks measure *effort.* But effort is subject to change, we think. It is the teacher's business to be an energizer—to spur the pupil on to make one hundred per cent use of what *unchangeable* powers he possesses. Teachers' marks are not a proper basis for homogeneous grouping either when used alone or in combination with other bases. We will leave this point by saying that mental tests, at present, afford the only proper basis of homogeneous grouping at our command.

An Aid in the Study of the Individual Child

Now let us consider the second practical use which we may make of I. Q's. derived from group mental tests. They may be made a valuable aid in the study of the individual child to determine how closely the pupil is approximating his possible maximum accomplishment with academic material.

The faculty of the Harvey High School, Painesville, Ohio, for the past three years, has used the I. Q. for this purpose. "Accomplishment" and "application" ratings are also used as aids to the continuous study of the individual child throughout the school year. The *main objective* has been to increase the *effort* or "application" of the pupil, thus bringing his "accomplishment" up to a maximum for his given ability. The mental test is invaluable as an aid in learning the pupil's probable ability.

Procedure for Securing Ratings

Of course we take the pupil's I. Q. and "accomplishment" and "application" ratings, not as infallible, but rather as a "point of departure" for the study of the pupil. Our procedure for securing the "accomplishment" and "application" ratings is as follows:

A. The ratings are secured near the close of one year for use during the ensuing year. The following instructions are sent out to the teachers:

"Accomplishment and Application Rating." To accompany the intelligence quotients obtained by giving the Terman Intelligence Test, a teacher-rating of the pupil, by means of a rating-scale is desired.

Pupils are to be rated separately on each of the two attributes:

1. Accomplishment.
2. Application.

The rating scale is prepared by the teacher as follows:

1. Try to recall, out of all your past experience in teaching the subject, that student who accomplished the most high-grade work.

2. Try to recall, out of all your past experience in teaching the subject, a typical "average" student in accomplishment.

3. Try to recall the student, out of all your past experience, who accomplished the least in the subject under consideration.

4. Arrange the names of the above students on a small card as follows:

(1) The name of the student who accomplished most, i. e., the "best" student you ever had in the subject under consideration.

(2) Place here the name of student whose accomplishment would probably lie between (1) and (3).

(3) The name of the "average" student.

(4) Place here name of student whose accomplishment would probably lie between (3) and (5).

(5) The name of the student who accomplished least.

5. Make an alphabetical list of the pupils in the class under consideration.

6. With the names on your rating scale before you, check the present members of your class as being most like one of the five on the card. If the pupil in the present class under consideration is most like the "best" pupil you ever had, write (1) after his name; if most like the average, write (3) after his name; if most like the poorest, write (5) after his name. If a pupil seems to belong between (1) and (3) score him (2). In a similar way use the term (4).

7. Repeat the entire procedure outlined above but have in mind this time the attribute of "application"; i. e., the quality which leads the pupil to put forth effort in an endeavor to accomplish.

Two columns of figures will then appear on the right-hand side of the alphabetical class list —a column showing the ratings in accomplishment, another column showing the ratings in application.

In giving these ratings the teacher should carefully avoid confusing "accomplishment" with "application." A pupil may "accomplish" a great deal with comparatively little "effort." Also a pupil may "apply" himself greatly yet "accomplish" little.

B. The ratings of all the teachers are assembled at the office and the average "accomplishment" and "application" ratings are determined.

Table I illustrates how the pupils' ratings appear on the completed office sheets. Actual data are given but pupils' names are omitted.

The ratings of the half dozen pupils in Table I show that the teachers regarded pupils No. 1 and No. 2 as putting forth effort somewhat in excess of their accomplishment. Pupils No. 3, No. 4, and No. 6 put forth effort in a degree less than their accomplishment. Pupil No. 5 put forth effort equal to his accomplishment.

TABLE I. Illustrating the Compiling and Averaging of Accomplishment and Application Ratings.

Pupil's Name	Accomplishment					Av.	Application					Av.
1	3	2	4	4	3	3.2	3	1	3	5	3	3.0
2	3	4	2	3	3	3.0	3	3	2	3	3	2.8
3	4	4	4	4	.	4.0	4	5	5	5	.	4.8
4	1	1	1	2	.	1.3	3	1	1	2	.	1.8
5	1	1	2	1	3	1.6	1	1	2	1	3	1.6
6	3	3	3	3	3	3.0	4	3	3	3	4	3.4

All could do *more* work, in the average opinion of the teachers.

Here we feel the need of something to supplement (not to take the place of) teachers' ratings, to help us, if possible, to make a still better "guess" as to the pupil's relative effort and accomplishment.

Table II gives some actual data taken practically at random from one of our teachers' class-books showing how we are using the I. Q. to *supplement* our teachers' ratings.

TABLE II. Data on 27 Students Enrolled in one of the Several Sections From Which the Students of Table III Were Selected

Pupil	1st 6 Weeks Mark	I. Q.	*Ac. Rating	*Ap. Rating	Test Two Weeks Later
1	A	123	1.6	1.2	B
2	C	120	2.5	3.3	C
3	B	120	1.0	1.3	A
4	D	119	3.6	3.6	E
5	C	119	2.5	2.5	C
6	B	118	3.0	2.8	A
7	C	117	3.4	3.6	B
8	C	115	3.5	3.3	C
9	B	115	2.4	2.2	B
10	D	114	2.2	2.0	C
11	C	114	2.5	2.3	C
12	E	112	5.0	5.0	abs.
13	B	100	2.6	2.2	B
14	C	100	3.2	3.0	C
15	D	100	2.8	2.8	D
16	C	98	2.6	1.8	D
17	D	98	3.8	3.4	B
18	B	97	2.2	1.8	A
19	D	96	2.6	2.0	C
20	E	96	3.3	3.0	E
21	D	95	3.6	3.4	D
22	E	95	3.4	3.2	D
23	C	94	2.0	2.0	C
24	D	90	3.6	2.8	E
25	E	87	3.2	2.8	E
26	E	85	2.8	2.4	C
27	E	83	3.2	2.8	E

*Accomplishment.
Application

Table II lists a class of 27 pupils, numerically, and in the order of their I. Q. Column 1 gives the pupils by number. Column 2 gives the marks awarded by the teacher at the end of the first six weeks. Columns 3, 4, and 5 give the I. Q., "accomplishment" rating, and "application" rating, respectively. These data were *not* furnished the teacher until *after* the first six-weeks' marks were issued. Column 6 shows the marks awarded on an objective test two weeks after the six-weeks' grades had been issued.

No attempt will be made here to make an exhaustive study of Table II. Only the classroom teacher would be in possession of the facts, learned from intimate association with the individual pupils, which would make an exhaustive study possible. Some facts and questions visible to anyone, however, which certainly merit further study by the classroom teacher are:

(1) Although six students received failing marks on the first six-weeks' grades, only *one* of these was rated by the teachers of the preceding year as doing failing work.

(2) Five of the six students receiving failing marks on the first six weeks *had I. Q.'s of 96 or less.*

(3) Pupil number 18 with I. Q. 97 was doing "B" work. Pupil number 4 with I. Q. 119 was doing "D" work. (There are other similar cases revealed.)

(4) Pupil number 4 went on down to "E" on the next test (column 5). What is the reason?

(5) Why is pupil number 12 a failure this year and last? Is it lack of academic ability?

Our main purpose, here, is to show that such data as is given in Table II, placed in the class-book of the teacher for ready reference, can be very useful, and provocative of much study of the individual pupil.

Table III contains data similar to the data given in Table II and similarly arranged.

TABLE III. Data on 23 Students Who Received Failing Mark (E) on First Six-Weeks' Work, 1926-1927 in an Academic Subject

Pupil	1st 6 Mark Weeks	I. Q.	Ac. Rating	Ap. Rating	Test Two Weeks Later
1	E	90	3.8	3.8	abs.
2	E	96	3.6	3.2	E
3	E	108	3.4	3.6	E
4	E	93	3.5	3.0	E
5	E	85	2.8	2.2	E
6	E	97	4.8	4.6	D
7	E	84	4.0	3.6	D—
8	E	81	4.0	4.0	D
9	E	109	2.6	2.8	D
10	E	94	3.0	2.0	D—
11	E	99	3.8	2.8	C—
12	E	103	3.2	2.6	C
13	E	87	3.2	2.8	E
14	E	85	2.8	2.4	D
15	E	95	3.4	3.2	D
16	E	83	3.2	2.8	E
17	E	112	5.0	5.0	abs.
18	E	96	3.3	3.0	E
19	E	112	3.8	3.8	C
20	E	98	4.5	4.5	D
21	E	94	2.4	2.4	C
22	E	108	3.4	4.0	C
23	E	101	3.8	3.6	E
Average	E	96.6	3.5	3.3	D—

The pupils listed in Table III were under the same teacher and taking the same academic subject. They were not in the same section but were distributed through four different sections. They all received failing marks for the first six weeks of the present year.

Some outstanding facts revealed by this table are:

(1) Only seven of the 23 students have I. Q's. of 100 or over.

(2) Only one was rated as a failure by the teachers of last year.

(3) Some allowance should be made by the teacher for the inferior academic ability of the group.

(4) Thirteen of the 23 were rated as *passing* or *above*, two weeks later.

If mental tests did no more than stimulate the teacher to the study of the individual child they would amply justify themselves in this day of "lock-step" education.

But no tests will ever *replace* the judgment of the teacher.

"The expert judgment of teachers will always be in demand. The real problem now is to make that judgment truly expert. If, as I believe to be the case, a part of the shortcomings of educational estimates has been due to lack of norms against which to check the accuracy of the estimates, then it seems to me that one of the most fruitful uses of the intelligence tests—as well as of other tests—will be their employment *to refine the judgments of teachers.*"[1]

[1]Buckingham, B. R., "Research For Teachers," page 146, Silver Burdett and Company, Chicago, 1926.

TRUANCY AS A SYMPTOM

If you had played truant thirty years ago, the town policeman probably found you at the swimming pool or lounging around a cigar store and by the back of the neck led you up to the principal. If you were young enough to play truant today, there are some communities in which the town policeman would still take you in tow. But if you chanced to live in a modern city where modern attendance methods were in vogue, you would go through something of the same procedure which is used on the patient with an ache in his head. In other words, no present-day physician considers headache a disease but merely a symptom of a disease. Truancy in itself is not a serious tendency; but it is a symptom of an underlying cause which may be very serious. And just as it is absolutely useless to continue taking headache pills without considering the cause of the pain, so it is useless to force a boy into school without attempting to do away with the maladjustment which makes him assume an anti-social attitude. — Ethel Taylor McCarthy, Philadelphia.

Pros and Cons of School Ventilation

(Second Article)

Harold L. Alt, Technical Editor of the Heating and Ventilating Magazine

Let us turn from this class of system to what has popularly become known as "window ventilation." This is by no means new as the writer remembers previous to 1905 attending a school with deflectors of glass at the bottom of the window and long pipe coils on the walls under the sills. Memory does not serve to recollect clearly whether there were exhaust registers at the ceiling or not.

Window ventilation at its best—that is to say as recommended by the New York State Commission on Ventilation—involves a good deal more than some of the enthusiasts of this system seem to care about admitting. In other words, it is not simply a window and a deflector board by any manner of means. Yet very few of the window-ventilation advocates, when pinned right down to cases, can avoid going back to the New York State Commission on Ventilation and its report to bolster up their arguments.

To save time it might be well to proceed at once to the destination at which we are ultimately bound to arrive anyway, even if by a more circuitous route. The so-called window ventilation as covered in the report of the commission did not receive a blanket approval but on the contrary was hedged about with provisos and other requirements which had to be met before reasonably satisfactory results could be expected.

It must be realized that the commission's experiments along this line were never fully completed in the first place, and besides, it is doubtful if all the members of the commission are in complete agreement and accord as to what the experiments—so far as carried out—really do indicate. Such being the case, it can readily be seen that too much should not be taken for granted at the present time.

Fig. 14 shows what has generally been considered as complying with the requirements to make window ventilation feasible. This consists, first, of a schoolroom considerably larger than the ordinary room as now used. The figure recommended is 250 to 310 cu. ft. per pupil. Then under the window is placed a radiator of approximately twice the size ordinarily used. This is arranged to be fully as wide as the window, and as much spread out as possible, to avoid trouble from a large heating unit in such a concentrated area. To further counteract the heat difficulty shields should be placed on the front of the radiator.

A deflector is located in front of the window and at the sill to prevent draughts blowing over the top of the radiator and onto the pupils. This deflector directs the current of incoming air upward, parallel with the face of the glass, so as to mix with the current of warm air rising up from the radiator. The assumption is that these two currents intermix and equalize before reaching the ceiling, and that a tempered current of fresh air falls back toward the floor, crossing the breathing line.

Something About Window Ventilation

After dropping below the breathing line it moves gradually toward the rear of the room again, crossing the breathing line as it lifts to pass into the exhaust outlet or outlets located on the inside wall near the ceiling. This exhaust arrangement is a *sine qua non* of the whole scheme and no *true* window ventilation arrangement can be said to exist where such an exhaust is not provided. More than this, the exhaust

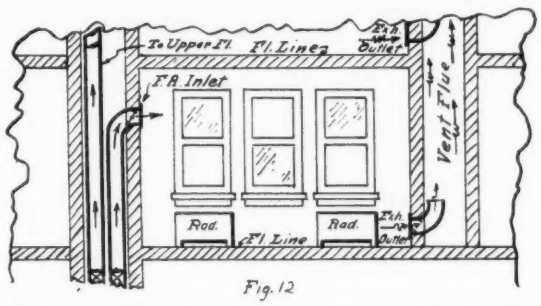


Fig. 12

flue must have an area of not less than eight square feet.

But, unless the room faces north or west, satisfactory results cannot be expected, because these are the directions of the prevailing winds in most localities, and the wind—to a very large extent—must be depended upon to furnish the motive power for "window ventilation." The wind has to blow the air into the window, it has to force the exhaust out; hence it follows that no wind, or a lee side of a building, means no ventilation. It is just as plain that too much wind is going to over-ventilate as it is that no wind, or a lee side, will not ventilate at all.

Again, in the window ventilation scheme, it is desirable to have graduated control on the radiator so that it need be only partially filled with steam when the outside temperature is not severe. This means either vacuum or vapor steam or, possibly, hot water. While automatic graduated control of radiators is, perhaps, not impossible to attain, to say the least, it is expensive and quite unusual being entirely outside of ordinary practice. The teacher must be presumed, for the time being, to be "operator-of-the-radiator" as well as the "window-opener."

From this it is easily seen that the scheme of window ventilation is no more fool-proof than the one employing a fan-and-duct. In fact, it is less so; for it is more difficult to get concerted action and intelligent manipulation from a large number of teachers—who have a multitude of other duties—than it is from one janitor solely responsible for the operation of the fan system.

The Unit Ventilator System

A modified form of the fan-and-duct scheme which consists of a heater, fan, and casing only—shown in Fig. 15—has attained considerable popularity in recent years. This is known as the "unit-heater" or "unit-ventilator" which possesses the advantage of delivering a specified quantity of warm air into the classroom at all times, regardless of the outside weather conditions. Some of these unit-ventilators are equipped with a two-way damper permitting fresh air to be taken from the outside, or the removal of stale air from the room.

When air is being used the apparatus operates as a heater. The same air is blown across the heater, and back into the room, this constituting recirculation as far as that particular room is concerned.

In a unit-ventilated school, these ventilators are located in all rooms requiring fresh air. They are set under the windows and may be hand operated, or thermostatically controlled. In the section shown in Fig. 15, the thermostat controls the small damper lever, which moves the damper to by-pass a larger or a smaller quantity of air around the heater, thus varying the temperature of the air to hold the room temperature at the proper point. When the room grows too warm, more cold air is used; if the room cools down, the dampers immediately shift and hotter air is at once the result.

Unit heaters have given good satisfaction. Humidity control is, of course, impossible as very little can be done toward cleaning the air in such a limited space; aside from these two differences they may be considered as the equal of a fan-and-duct system.

While it is not always necessary to operate the fan in the unit ventilator scheme, it is essential to operate it when ventilation is required. Moreover, it is another case where the teacher must start and stop the apparatus, even if the air temperature is automatically controlled.

Summarizing Fan and Duct System

From an engineering standpoint, the advantages of a fan-and-duct system with the apparatus usually included in a first class installation may be summarized as:

(a) A positive supply of air to each classroom regardless of outside weather conditions.

(b) An exact quantity of air within reasonable variation limits.

(c) Air at a proper temperature or any temperature that may be desired.

(d) Air at a proper humidity or any humidity that may be desired.

(e) Air cleaned by washing with water, or filtered through air filters or both.

(f) Air not requiring the use of a fan, except when the rooms are occupied (assuming a split system).

(g) Air which can be recirculated at a great saving in cost when the principles of recirculating air are understood and the treatment with ozone or other processes is more fully experimented with and perfected.

(h) Automatic control which does not leave it to the individual teacher to determine the amount and the kind of air for the class.

Taking the so-called window ventilation next it is found that for the same respective items, the following may be said:

(a) Supply of air delivered to each classroom not positive or dependable, being controlled by the wind, direction of the wind, amount of window opening, etc. Even a reversal is possible with rooms on the lee side of the building.

(b) Quantity of air unknown and variable, depending upon wind, direction of wind, amount of window opening, etc.

(c) Air temperature variable depending upon temperature of incoming air, quantity of incoming air, and the extent the radiator is operating at any particular time.

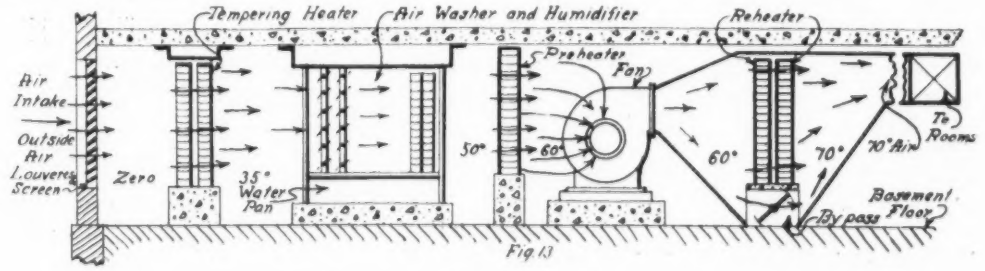


Fig. 13

Note: The first installment of this article appeared in the January, 1927, issue.

(d) No humidifying is possible with this system.

(e) No air cleaning or filtering is possible with this system.

(f) No fan operation required at any time. This is one point where window ventilation has an advantage over the fan-and-duct system in cost of operation.

(g) Recirculation of air impossible, as this more than counteracts the saving in power effected in (f).

(h) Hand control requiring each teacher to be her own janitor as far as heating and ventilating is concerned.

Taking the unit ventilators, it might similarly be said that:

(a) A positive supply of air regardless of outside conditions.

(b) An exact quantity of air within reasonable variation limits.

(c) Air at a proper temperature.

(d) No humidity control possible.

(e) Little air cleaning or filtering possible owing to limited space conditions.

(f) No fan operation necessary except when room is occupied (if a split system is used).

(g) Recirculation impossible.

(h) Each unit is usually controlled by the teacher and conditions are largely similar (as far as this item is concerned) with window ventilation.

Washed and Unwashed Air

From the above it is plain that if washed air with proper humidity is required, there is only one system in use or advocated which can supply it. On the other hand if simply warmed air is desired any of the three can qualify. If cold draughts are to be avoided only the fan-and-duct system and the unit ventilators can answer while the same can be said of positive air quantity. The results are tabulated as follows:

Desirable Qualities	Fan-and-Duct	Window Ventilation	Unit Ventilation
Postive air delivery.	1	0	1
Positive air quantity	1	0	1
Proper temperature.	1	1	1
Proper humidity....	1	0	0
Air washed and cleaned	1	0	½
No electric power required for operation	0	1	0
Recirculation	1	0	1
Teacher relieved of control	1	0	0
TOTAL.....	7	2	4½

With the above as the basic desirable features for any ventilating system it is seen that the fan-and-duct system has seven counts, the unit heater four and one-half, and the open window scheme only two. It might be claimed that the teacher's turning on and turning off the unit ventilators does not constitute responsibility of control, at least as far as room temperature is concerned. If this claim is admitted unit ventilation could count five and one-half instead of four and one-half points.

As far as installation costs are concerned, the figures run in the opposite direction; the fan-and-duct system is expensive to install; the unit ventilator is somewhat cheaper, while window ventilation is claimed to be the cheapest of the three. Some items, however, increase the cost of the window ventilation scheme that do not show in the heating contract. The large size rooms, doubling the size of the exhaust ducts, and loss of the use of otherwise available and desirable space on the south and east sides increase costs on the *building*, even if not on the heating and ventilating contracts. As the taxpayer is paying for the *total* he is not likely to be interested whether it is called by one name or another.

The Factor of Cost

So far as operation is concerned, the costs for *equal amounts of air* is the same, regardless of the system used or the means employed, unless recirculation is studied and the stale air reused again and again either with or without the addition of fresh air for diluting.

For a given temperature inside the building and outside, the heat losses through the wall, roof, glass, and doors are identical. Therefore, there is no preference to be expressed on this score for any particular system and when ventilation is considered for a given quantity of air and a given temperature-rise in the air the heat required is the same. It takes just as much heat to raise 10,000 cubic feet of air per minute from 0° to 70° whether it is injected through a duct system, by means of a unit ventilator, or is allowed to blow in the window. Therefore, there is no advantage in cost of operation in favor of any scheme *which supplies the same amount* of ventilation, with the possible exception of the electric power item.

To farther assist in the discredit of the fan-and-duct systems some have even gone so far as to declare thirty cubic feet per minute for each pupil is excessive and that twenty cubic feet will do just as well. It is hardly within the province of the ventilating engineer to take up such an argument, as this is purely a medical question. But supposing that this should be proved at some later date to be true, any fan-and-duct system now supplying air on a thirty-cubic-foot basis will certainly experience no difficulty in reducing this amount to a twenty-cubic-foot basis by simply slowing down the fan.

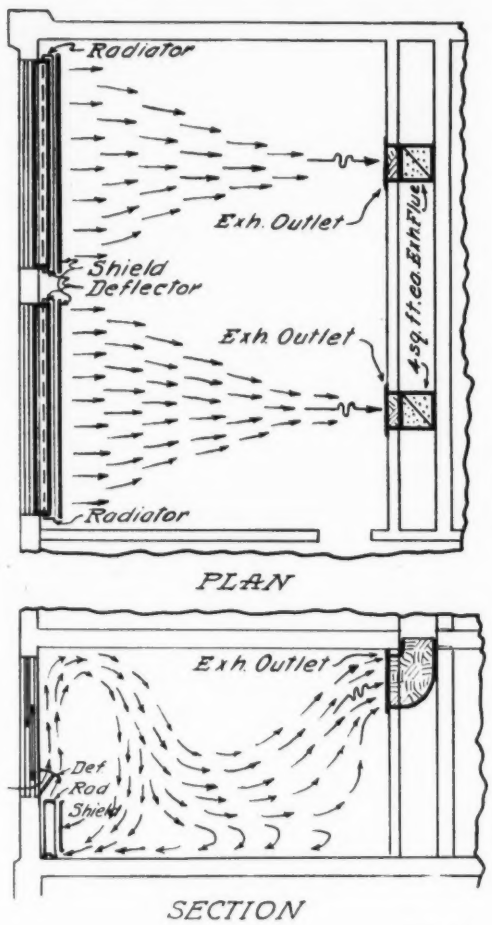
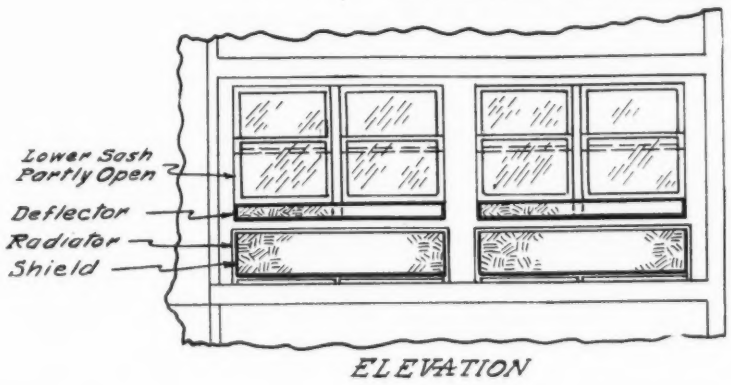


Fig. 14



Another difficulty experienced is that after costly fan-and-duct systems have been installed they are deliberately allowed to stand idle, and in many cases, are not operated after the first few months. Later the above statement is forgotten and a lot of facts and figures are presented showing the yearly amounts the taxpayers must pay to *operate these systems* which it has just been claimed were not operated. Both statements cannot be true. If the fan-and-duct systems cost the amounts estimated to operate them they *must be operating;* if they are allowed to stand idle, then they are not costing such annual amounts at all.

The claim has also been made that the temperature is bound to rise in fan-and-duct ventilated rooms. This is absolutely untrue where automatic temperature regulation is provided and kept in operating condition. An increase of two degrees F. in room-temperature is sufficient to cause the radiator to shut off entirely and a further rise result in a decrease of temperature in the incoming air to counteract the rise. What happens is that a point of heat balance is struck so that little automatic control is required. In other words, the automatic control never allows the room temperature to get far away from the ideal, and by holding it closely to the proper degree makes alteration in the temperature of the incoming air an almost negligible factor.

Still other fallacies are advanced in the claim that the use of the thirty-cubic-foot basis causes the introduction of such large amounts of air into the room as to cause unpleasant and even dangerous draughts! As a matter of fact, the entering air from a fan-and-duct system can be made to assume any velocity desired by the expedient of expanding the duct and register-face at the warm air outlet. The velocity now commonly used is 250 feet per minute for inlet registers located 8′ 0″ above the floor. This could be made 200 or even 150 feet per minute if such velocities ever prove more desirable than the 250 feet-per-minute standard.

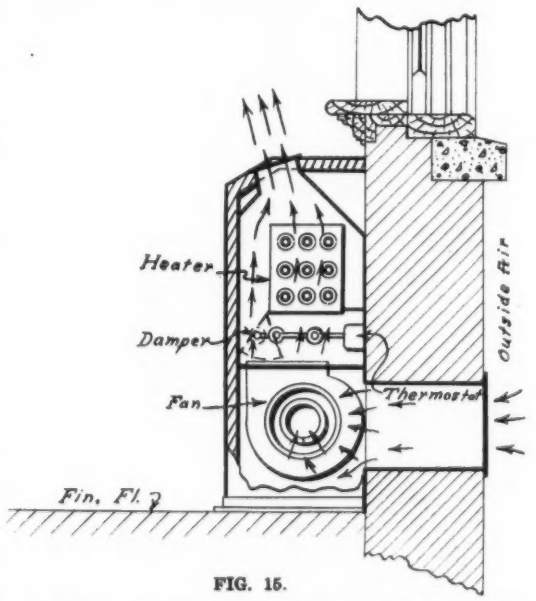


FIG. 15.

(Continued on Page 134)

The Los Angeles Schools' Business Department

O. H. Barnhill

Los Angeles is in many respects such a super city that it is difficult to write about her without using superlatives. In speaking of her public schools, however, one may be pardoned —especially an outsider—for according them high praise, since they are the product of teachers and officers who are laboring unselfishly for the public good.

The business department of these schools is the largest in the United States and, as far as those who are familiar with the situation are able to judge, one of the, if not the most efficient. The preeminence in size is not due to the extent of maintenance work, but to the magnitude of the expansion program which has been carried out during the past six years and to the policy of performing an unusually large proportion of the resultant work inside the organization.

The number of school buildings erected and equipped during this period by one organization never has been equalled, nor even approached, by any American city. In addition to tax money used for that purpose, $60,000,000 worth of school bonds were sold and most of the proceeds expended for new schools and additions to old ones.

In a year and a quarter—from July 1, 1925, to October 7, 1926—128 permanent buildings and 59 bungalows were completed. On the date last mentioned 56 permanent structures and nine temporary ones were being erected, while plans for 24 permanent buildings and three bungalows were being prepared.

This makes a total of 279 buildings—of which 208 are permanent structures—planned and erected in less than three years. Can you beat it?

These figures, significant as they are, only partially indicate the magnitude of the work carried on by the business department of the Los Angeles schools. There are various ways in which the primary and secondary educational needs of a city of a million souls, with an annual population increase of 100,000, may be taken care of. The easiest and simplest way is to buy all supplies and equipment and to employ outside workers for new construction, as for a good share of the supply and maintenance jobs. When equipment is needed for a new building the various articles may be obtained direct from dealers' warehouses.

The business department of the Los Angeles schools operates on a different basis, one which entails far more work, responsibility, capital, storage facilities, and a great many more employees. In addition to school janitors and watchmen, more than one thousand persons are working in this department.

The architectural and building divisions, which in many school organizations are nonexistent—have 74 workers at the present time. Sixty-nine men make up the equipment division, and 58 more the electrical department. Forty-nine persons work in the purchasing and distribution division, and 48 in the supply store.

Four hundred sixty-five workers—nearly one-half the entire number employed in the department proper—labor in the maintenance division. While some cities employ more workers in this last named department, 465 is an exceedingly large number for a city the size of Los Angeles. The explanation lies in the fact that many of these men do manufacturing and construction work.

Why does the business department employ so many persons? What is its policy and plan of operation?

MR. WM. E. RECORD.

In the first place, no trouble or pains are spared to save tax money. If an article can be manufactured cheaper than it can be purchased ready-made, it is fabricated in the school shop. If it is more economical to repair certain equipment, instead of hiring such work done by outsiders or to sell the articles and buy new ones, then the first-named course is followed.

Whenever money can be saved by buying goods in large quantities, storing and using them as needed, that is done. If a certain type of service can be performed more economically and efficiently by employees than by outsiders, then an organization is built up to care for that activity, as far as practicable. The result is a department of super-size and efficiency.

As an indication of the volume of business transacted in one division, 35 carloads of pupils' desks—22,000—were purchased for the present school year; also 11 carloads of chairs—24,000. Last spring orders for regular school supplies were increased 20 per cent, yet already—December 1—there is a shortage of stock. Requisitions from the schools for supplies during November were 49 per cent greater than a year ago.

At this writing equipment was being purchased for the Wiggins trade school, for which a building of the skyscraper type has been erected, and the Jacob Riis boys' school. Both schools were opened in February. Forty-three other new schools are to be opened between that month and next September.

Years ago, when the purchasing and distribution division was simply snowed under with increasing orders for supplies and equipment, the workers were assured that the peak period soon would pass. Instead, the demand continually has been growing greater and more insistent, with no signs of letting up.

In addition to the great and continuous school building program necessary to provide for Los Angeles' growth, a six-year effort has been made to catch up with previous unsupplied needs. During the World War this city, in common with the rest of the country, got behind with her building, both public and private. In spite of every effort to meet the situation, however, many schools still are overcrowded and present prospects are that this condition will continue indefinitely.

When, eight years ago, W. E. Record assumed the office of business manager of the Los Angeles schools, he entertained no illusions regarding the size and difficulty of the task ahead. It would, of course, have been comparatively easy if he had had as much of the work as possible performed outside the organization. That would have been following the line of least resistance and would have resulted in the avoidance of much labor, responsibility, and unpleasantness.

But the new business manager was not built that way. He is one of those men who, upon hearing a threat, rises refreshed. The harder the job the better he likes it. He thrives on difficulties and fattens on fighting. While hammering away at his herculean task for eight long years, he constantly has envisioned a vast, increasing army of children and young people, in need of adequate educational facilities, without which numerous future careers might be crippled.

Another army of parents and teachers constantly and insistently have been demanding more schools, more equipment, more playground space. Many of these well-meaning individuals have been unable to realize the limitations of even sixty million dollars, when applied to an expansion program as that which faced the Los Angeles board of education.

On the other side have been regiments of architects, contractors, laborers, supply and equipment dealers, landowners, and other interested persons, striving in every way to transfer to themselves as much bond and school tax money as possible.

Between these two opposing forces Mr. Record has stood like a rock, firm and unwavering, according to Susan M. Dorsey, superintendent of Los Angeles schools. He has fulfilled the highest obligations of his office, in spite of repeated and bitter onslaughts of private interests, which sought to enrich themselves at the expense of the schools.

Neither threats nor personal appeals have sufficed to turn this official, entrusted with the expenditure of more than $10,000,000 a year, from the straight and narrow path of public duty. Courage and conscience, coupled with keen business judgment, are Mr. Record's outstanding characteristics. He has needed to be the fighter he is, as well as an expert organizer and effective executive.

Representatives of school boards from other cities who inspect the business department of the Los Angeles schools marvel at the efficiency everywhere in evidence. This impression is deepened as the visitors examine the work in detail and come in contact with the division heads, whose industry and application to the task in hand, are very noticeable. There is no inter-departmental jealousy, each official and his assistants working together in harmony, realizing that they are integral parts of a complete organization.

The women workers of the business department deserve special mention. Every division head has an efficient secretary, who takes care of several jobs, in addition to such ordinary secretarial work as answering telephone calls, giving out information, and attending to correspondence. These secretaries make every minute count, switching from one task to another. Their grasp of detail is remarkable. Some of them have held their places a long time and are familiar with every phase of their division.

In addition to the head secretaries, there is a small army of young lady clerks, bookkeepers, and stenographers, each doing her part to maintain the standard of the department.

Another outstanding position in the business organization of the schools is the assistant to the business manager. He is the official "trouble shooter" and employs and discharges most of the help. He did these and other things so efficiently while employed in another and minor capacity that the office which he now fills was created.

Labor troubles are practically unknown. Los Angeles is an open shop town. Union and non-union men work side by side for the same wages without any friction. School jobs are much desired, because they afford steady work at going wages, with a nine-day vacation on full pay every year.

In commenting on the splendid service secured in all departments, Mr. Record recently remarked: "Everything savoring of politics and special privilege is eliminated. Ability to perform the kind of work that produces results is the main thing considered in selecting employes and hiring help. If a man can't 'carry a message to Garcia' and deliver the goods he is let go, or not hired in the first place. Our work is carried on without fear or favor. We are answerable only to the board of education, which holds me personally responsible for results."

The work of constructing and equipping new buildings is correlated with that of operating and repairing existing structures. For example: The heating engineer has general charge of all heating equipment in use and inspects all heating installations in new buildings. The sanitary and electrical engineers likewise serve in dual capacities.

The painting foremen oversee all repair paint jobs and inspect new painting. The equipment foreman looks after equipment repairing and installs new equipment. This includes the laying of linoleum, making and setting blackboards, and placing desks.

A question which sometimes is difficult to decide is whether outside help shall be employed to perform certain tasks, or the work taken care of by the department. Another and similar problem is, how far will it pay to go in manufacturing equipment?

An example of advantages gained by the schools doing their own work is afforded by the architectural and building departments. Plans for new buildings are prepared at a cost of 1½ per cent of construction as compared with 4 per cent charged by private architects. This does not prove, of course, that outside architects are overcharging, but that the school architect can operate more economically.

A greater saving has been effected by having all building operations supervised by employes of the business department. It may at first seem strange that private architects are not permitted to supervise the construction of buildings they have planned. Their charge for such service, however, is 2 per cent, whereas the business department performs the same work more efficiently for half that amount. One per cent may seem a small amount to save, but on the $20,000,000 building program now in progress it amounts to the very respectable sum of $200,000.

The question of manufacturing supplies is more complicated. Certain articles, however—such as blackboards, curtains, and window shades—Mr. Record has found it pays to make in the quantities which Los Angeles consumes. Stage curtains for which contractors charged $100 each, he now has constructed at a cost of $36 to $40, thereby saving three-fifths of the curtain money.

Window shades fomerly cost an average of $120 per building. Now they are made for $68. This item alone represents a saving of $10,000 in equipping the 200 buildings constructed in the past two years. Blackboards bought in the local market cost 17 to 20 cents per square foot. A superior article now is manufactured in the school shop at a completed cost of 7 to 9 cents.

MAIN BUILDING OF THE BUSINESS DEPARTMENT OF THE LOS ANGELES SCHOOLS, LOS ANGELES, CALIF.

Linoleum is purchased in carlots and laid by experts, who are paid $7 per day. Four crews are employed to do this work alone. From 15 to 25 cents is saved on every square yard of linoleum used.

Because dealers do not know when Mr. Record will start making other articles, if their prices are not low, the operation of a school factory often ensures much more favorable terms than dealers otherwise would quote. It is not altogether a question of what is being made in the school shops, but rather what may be manufactured there, which enables the business department to secure supplies on very reasonable terms.

Of course the argument is advanced that local dealers and manufacturers are taxpayers and therefore are entitled to the school business. Where only a slight saving could be effected by having the work done by the business department, it is given to outside concerns. When, however, it is possible to save considerable sums, thus providing money for the erection of much needed school buildings, this argument loses its force. Neglecting this opportunity to save school money would be equivalent to making gifts of large sums to private individuals. At least, that's the way it looks to Mr. Record, whose position is endorsed by the board of education.

Other substantial savings are effected by operating repair shops. The entire top floor of the new furniture warehouse is to be devoted to repairing and refinishing school desks and similar equipment. A $6 desk is taken up, thoroughly cleaned and refinished—making it practically as good as new—and replaced, at a total cost of 70 cents.

Desks are refinished once every three or four years, making their upkeep only about 20 cents per annum, which is less than four per cent of the original cost. One hundred desks per day now are being put through the mill, where the expense of cleaning and recoating has been cut by quantity work from $1 to 55 cents.

Similar savings are effected in the extensive metal working shop, where hardware and plumbing equipment are repaired and some articles manufactured.

The electrical engineer and his assistants draw all plans and specifications for electrical wiring and equipment for all new buildings, supervise the installation and inspect all completed jobs. By doing this work in the most efficient and economical manner possible, it is estimated that the electrical department has saved $100,000—enough money to pay for the erection and equipment of one large, modern school building—out of the present bond money. An enormous saving was recently effected in the purchase of electrical clocks, of which 3,500 are used by the Los Angeles schools.

The purchasing and distribution division is just getting in shape to operate with full efficiency. Heretofore it has been handicapped by insufficient help and shelving. Now, with a well-trained force of 50 people and $50,000 worth of new steel shelving installed, unprofitable delays are eliminated and the immense volume of business is handled to advantage.

Twenty one thousand different articles are handled in the great school store, which occupies the three upper floors of the main warehouse, the basement, and parts of several other buildings. In order to expedite the purchase of this variety of items, standardized specifications are being prepared for each article. These will be card indexed, ready for instant reference. A record is kept of the latest price paid for every item.

The receiving room is located on one side of the driveway which bisects the first floor of the main warehouse. Before being sent to store or shop, a specimen of every article is compared with the sample submitted at the time purchase was made. Samples are kept in a separate room, classified and labeled.

As supplies are needed they are assembled in the shipping room, which is on the opposite side of the driveway from the receiving room. Pipe fittings and other heavy plumbing supplies are stored in the basement, to save lifting as much as possible.

The purchasing clerk's buying methods, by means of which some surprising bargains are obtained, also the arrangement of the stock in

the storeroom, deserve to be described in another article.

The new furniture warehouse, now in the course of construction, will be 116 by 135 feet, eight stories and basement. This will be a Class A warehouse of reinforced concrete, absolutely fireproof. The contents will be protected with automatic sprinklers. Although the average warehouse of similar size and quality of construction costs around $2 per square foot, this building is being erected at approximately half that price.

The general contract, including painting, was let for $147,324; electric wiring, $3,571; plumbing, $8,488; electric freight elevator, $6,900; sprinkler system, $12,000; total, $178,283.

The freight elevator will be large enough to transport an entire truck body, loaded. Five trucks are being equipped with detachable bodies, which when loaded can be rolled off onto the elevator.

The buildings occupied by the business department are located at Fourteenth and San Pedro streets, a half dozen blocks from the retail shopping district. They are grouped around an inner court and alley, which are utilized by the 20 school trucks.

The main building fronts San Pedro street and is 70 by 285 feet, a concrete structure five stories high, with basement. The first floor contains the receiving and shipping departments, R. O. T. C. storage room and office, sample room and electrical, plumbing, hardware and shade stock supplies.

The second floor is devoted to offices, those used by the business manager occupying the north end. A wide corridor runs through the center of the building, dividing the offices on either side, south from the manager's quarters. Those on the front, or east, are occupied by the realty, architectural, equipment, textbook, telephone, employment, custodian, and monthly pay-roll departments, and one large room used by the electrical, sanitary, and heating engineers. The west offices are occupied by the building, purchasing, and maintenance departments.

As originally planned, the third floor was to be used for stock storage, but it was found necessary to set aside 14,000 square feet for the drafting room, stock accounting, daily payroll and inventory departments, and ladies' restrooms.

The following supplies are stored on the fourth and fifth floors: Textbooks, janitors' and playground supplies, dry goods, chemicals, stationery, printed forms, cookery and kindergarten supplies, and surplus hardware, electrical, and plumbing goods.

A two-story brick building in the rear provides space for the following shops: Electrical, glazing, sheet metal, curtain and shade, locksmith, typewriter, garage repair, mill and cabinet, varnishing, and desk refinishing.

Across the alley on the west, adjoining the new furniture warehouse, is the lumber yard, containing material valued at $30,000. A nearby structure 40 by 90 feet contains a large stock of paint, brushes, and other painters' supplies.

Except where they are divided near the middle of the building, all the business offices are connected with each other by inside doors. This makes the various divisions physically interlocking, as well as closely connected in other ways. Some departments, such as the one dealing in real estate, having little contact with the general public, do not advertise themselves with lettering on the doors. This lessens contact with visitors and saves workers' time.

Following is the approximate square feet of space devoted to each department under the business manager:

Furniture storage, 115,000; stores, 60,000; mill, 15,000; painting and varnishing, 10,000; miscellaneous storage, 10,000; maintenance 6,000; architecture, 6,000; purchasing and distribution, 3,500; manager's office, 2,400; military, 2,200; blackboards, 2,000; sheet metal, 2,000; building, 1,400; curtains and shades, 1,300; garage repairing, 1,000; electrical, 800; glass, 800; keys, locks and typewriters, 400.

The low cost at which school buildings are planned, erected, and equipped is an indication of the economical administration of the department. A typical elementary Los Angeles school, recently finished, cost only 20 cents per cubic foot. It is a 12-unit structure containing 400,700 cubic feet, two stories high, brick construction, stucco exterior, artificial stone trimmings, and tile roof.

The general contract cost $60,000; ventilating and steam heating—providing for freezing temperatures—$6,375; plumbing, $6,145; electrical, $2,187; painting, $2,178; architectural plans and specifications, $3,147; total, $80,244.

A typical junior high school of similar construction, 57 units, cost but 19 cents per cubic foot. A 50-unit senior high school of the same class was built for only 18 cents per cubic foot.

Here is the organization of the business department:

Business Manager. Assistant Manager, Secretary, Stenographer and Transportation Clerk, Clerk and Typist, Chauffeur.

Architecture. Architect, Assistant Architect, Surveyor, Secretary, Clerk and Typist, 32 Draftsmen.

Building. Superintendent, 2 Assistants, Secretary, Stenographer and Clerk, 2 Clerks and Typist, 30 Inspectors.

Maintenance. Superintendent, Mill Foreman, Tinshop Foreman, Senior District Foreman, 6 District Foremen, 7 Assistant District Foremen, Secretary, 4 Clerks and Typists, 141 Laborers, 8 Locksmiths, 21 Mill Carpenters, 6 Mill Painters, Painting Foreman, 2 Assistant Painting Foremen, Garage Foreman, Technical Clerk, Service Clerk, 102 Carpenters, 6 Glaziers, 16 Plasterers, 5 Mill Machinists, 87 Painters, 29 Tinners, 2 Sewing Machine Repair men, 6 Printers and Helpers, 2 Garage Mechanics, Piano Tuner, Fuel Inspector.

Heating. Engineer, 5 Furnace Men, 8 Steam Fitters, Inspector of Engineers, Heating Foreman.

Sanitation. Engineer, 29 Plumbers.

Electrical. Engineer, Electrical Foreman, Electrical Equipment Foreman, Clock and Bell Inspector, 54 Electricians.

Equipment. Foreman, 60 Equipment Men, 2 Linoleum Layers, 6 Blackboard Setters.

Janitor Service. Inspector, 2 Assistant Inspectors, Supervising Gardener, Payroll Clerk, Comptometer Operator, Clerk and Typist, 327 Head Janitors, 916 Assistant Janitors, 36 Saturday, Sunday and Holiday Watchmen, 51 Night Watchmen, 51 Engineers, 71 Gardeners, 18 Toolkeepers, 6 Carpenter Tool Sharpeners.

Transportation. Inspector.

Military Equipment. Custodian, Assistant Custodian.

Purchasing and Distribution Purchasing Clerk, Assistant Purchasing Clerk, Chief Equipment Supply Clerk, Junior Equipment Clerk, Printing Clerk, Library and Textbook Clerk, Contract Clerk, Index and File Clerk, Senior Clerk, Order Clerk, Errand Boy, Stock Assembler, 2 Equipment Supply Clerks, 2 Estimating Clerks, Secretary, Junior Bookkeeper, 2 File Clerks, 27 Clerks and Typists, Direct Delivery Clerk, Comptometer Clerk.

Store. Storekeeper, Assistant Storekeeper, 3 Junior Receiving Clerks, Senior Receiving Clerk, 3 Inventory Clerks, 22 Stock Clerks, 17 Stock Clerk Helpers.

Shipping. Shipping Clerk, 20 Truck Drivers, 19 Truck Driver Helpers.

Real Estate. Investigator, Assistant Investigator, Clerk and Typist, Junior Bookkeeper.

Telephone. Chief Operator, 2 Assistant Operators.

Total number of Employees, 2,346.

The Winfield Salary Schedule

W. W. Connell, Superintendent, Winfield, Kan.

The principles governing salaries as set forth below contain some features that may appeal to boards of education in small places. There is much confusion about bases of determining salaries, especially where the single salary schedule is not possible.

This scheme suggests standards of experience and preparation for the elementary school, for elementary principals, and for the junior-senior high school. In this particular school system, payment is made in twelve equal installments throughout the year and salaries with increases are based on multiples of twelve. Other special features will be apparent in the principles here set forth.

Principles Governing Salaries in the Winfield Public Schools

1. Continued professional growth and preparation will be closely related to salary levels and salary increases. This means that teacher merit will determine salary advancement.

2. Four evidences of professional growth and skill will be considered in determining salary levels. These are: Academic and professional preparation, teaching success, cooperation and ability to carry extra responsibility, and successful experience. Each of these items is to be carefully considered in the final placement of a teacher on the salary schedule.

3. It is recognized that a salary schedule cannot make provision in detail for proper remuneration for all types of service in the school system. The law of supply and demand regulates to quite an extent the salaries of some special teachers and of men teachers. It is expected that the board of education will make such provision on recommendation of the superintendent as is necessary in the employment of special teachers.

4. Regular salary advances are to be made over a period of years until the maximum is reached, provided the teacher has attained the standard qualifications and is classified on the salary schedule.

5. For especially commendable work over a period of years or for unusual preparation and success, it is expected that the board of education may give recognition to a few teachers by exceeding the salary maximum.

6. Teachers may, for failure to secure further professional preparation or for diminished teaching success, be removed from the benefits of the schedule of salary increases by action of the board of education.

7. Standards for three groups of teachers, based upon professional preparation and successful experience, are established as follows:

(1) Teachers in the Elementary Schools:
  (a) Certification resulting from a minimum of sixty college hours of academic preparation:
  (b) Two years of successful experience under favorable educational conditions.
  (c) Minimum salary.....$1,020
  Standard salary..... 1,140
  Maximum salary..... 1,410

(2) Principals in Elementary Schools:
  (a) Certification resulting from a minimum of ninety college hours of academic preparation.
  (b) Four years of successful experience under favorable educational conditions.
  (c) Minimum salary.....$1,200
  Standard salary..... 1,320
  Maximum salary..... 1,590

(3) Instructors in the Junior-Senior High School:
  (a) Certificate and qualifications in conformity with the requirements

(Continued on Page 136)

Iowa's New Uniform School Accounting System

Emmet L. Morris, Assistant Director of the Budget, Des Moines, Iowa.

Iowa has a complete and comprehensive accounting and budgetary system comprising the expenditures of all public money from the state departments and institutions down through the county and township organizations to the municipal and school district corporations. The entire public financial system is under the immediate direction of one Director of the Budget and his staff, the director being appointed by the governor for a period of six years.

Under the able direction of Honorable Ernest L. Hogue, Iowa and her originally experimental budget department has emerged from the experimental stage and is now accepted statewide as a successful reality and necessity. This work in Iowa has been pioneer work hence it has been very slowly and cautiously done.

From the school side of the accounting and budgetary procedure it may be said that the budget law does not include within its scope the small one-room rural schools where the expenditures are scarcely if ever much in excess of $1,000 per year. The law does include all consolidated and independent districts and undivided township districts.

The biggest business in any community in the state of Iowa is its system of public schools. Nearly fifty per cent of the tax paid in the average Iowa community goes to public schools.

As in all states of the United States, the common object of all citizens is to give the children the greatest possible amount of education for the least number of tax dollars. The budget department of Iowa is and has been attempting to help all local districts to carry this aim to the most successful realization possible.

Adequate school records and reports are essential to the successful operation of any school district. The truth of the condition and the facts in connection with the administration of school funds are best and most clearly told by concrete facts in the form of accurately and systematically kept financial records rather than by mere personal opinions or personal judgments.

Boards of education, citizens, and taxpayers in every school district in Iowa are interested in knowing the concrete facts that are, in the final analysis, the revealing facts in the operation of public schools.

Budgeting is a term that has been much misused and even abused. It has as many definitions as there are people who have considered the term. Many fanciful definitions have been given but for the layman the definition could well be given as follows: "Budgeting is a systematically tabulated foresight into the financial program of the future, made in the light of past experience over similar periods."

Budgeting does not always mean, as the common opinion might have it, a reduction of funds. It means primarily a more systematical and equitable distribution of funds and usually does ultimately result in reduction. This reduction is not effected through loss of efficiency but rather through increased efficiency. Budgeting permits a better distribution because it points out the parts of the system that are receiving too much or too little attention or stress. Satisfactory adjustment can be made when the facts are known.

Budgeting, however, is somewhat remote from our discussion at this time, for budgeting is not the first thing to be considered in school finance, but it comes last, as shall be explained in the following lines.

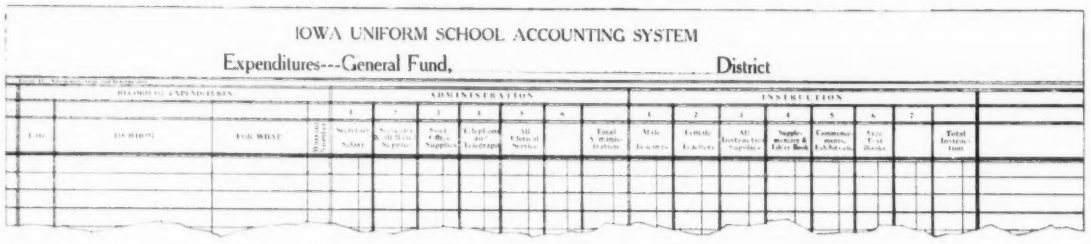
No building can be built without material—neither can a budget be built without material on hand with which to build it. The material with which we build a budget must consist of the complete and adequate records kept for at least one complete fiscal period preceding the time for building the budget.

We are brought now to the reason for Iowa making a complete, intensive, and extensive research into the existing accounting and budgeting plans used in all states that have uniformity, and also a study of the methods used by the leading cities in their schools throughout the entire United States, where they have been successful in finance.

Coupled with this research, Iowa also has made a rather complete survey of a great number of school districts in the state, from the smallest consolidated school in the state to the largest city system. Personal calls have been made by representatives of the budget department on many school officers over the state, and school finance was discussed from their standpoint. Existing conditions and practices were brought out and very valuable suggestions were received from the men in the districts, "the men out home," who actually do the work of keeping school district records. Survey sheets were completed by three fourths of the schools called upon, and valuable data were received from this source as to what the officers of these districts would consider proper.

The research and survey brought together two very pertinent factors whose mixture has not resulted in a purely theoretical fancy of learned educators nor, on the other hand, the ridiculously simple and inadequate system that some of the district officers would have because of the minimum of effort required for the keeping. The combination of the theory of the educator with the results of research and the suggestions of the men who do the work in the various districts has produced a mixture of "just enough of what the districts need with just enough of what they want" to make the Iowa Uniform School Accounting System a practical and usable system, not too simple and yet not too elaborate.

Many interesting extremes were found in the survey that was conducted. Some extremely small schools were found to be keeping records

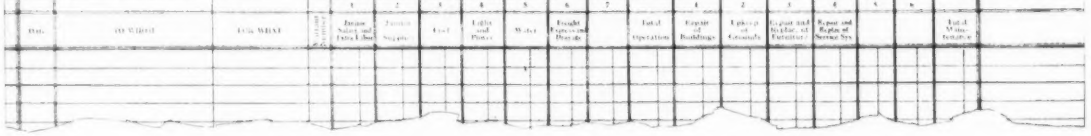

IOWA UNIFORM SCHOOL ACCOUNTING SYSTEM

Expenditures---General Fund, _____ District

RECORD OF EXPENDITURES | ADMINISTRATION | INSTRUCTION

Date | TO WHOM | FOR WHAT | Number | 1 Salaries of School Officers | 2 Salaries of Clerks and Assistants | 3 Supplies and Postage | 4 Expense and Travelling | 5 All Other Expenditures | 6 Total Administration | 1 Male Teachers | 2 Female Teachers | 3 All Instruction Supervision | 4 Supplementary & Library Books | 5 Commencement, Exhibitions | 6 Text Books | 7 | Total Instruction

FORM 1 E. EXPENDITURES FOR ADMINISTRATION AND INSTRUCTION.

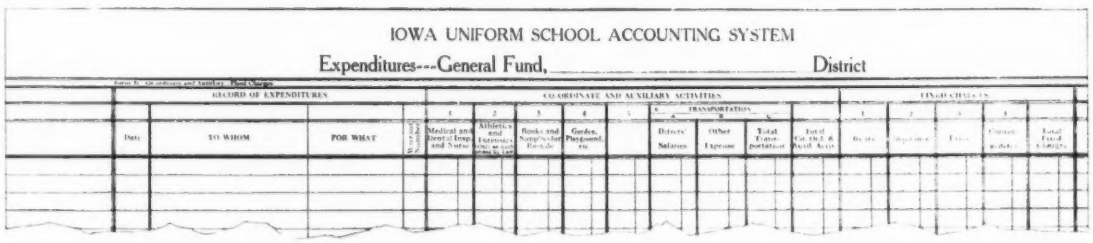

IOWA UNIFORM SCHOOL ACCOUNTING SYSTEM

Expenditures---General Fund, _____ District

RECORD OF EXPENDITURES | OPERATION | MAINTENANCE

Date | TO WHOM | FOR WHAT | Number | 1 Janitor Salary and Extra Labor | 2 Janitor Supplies | 3 Coal | 4 Light and Power | 5 Water | 6 Fuel Engineers and Firemen | 7 | Total Operation | 1 Repair of Buildings | 2 Upkeep of Grounds | 3 Repair and Replac. of Furniture | 4 Repair and Replac. of Service Sys. | 5 | 6 | Total Maintenance

FORM 2 E. EXPENDITURES FOR OPERATION AND MAINTENANCE.

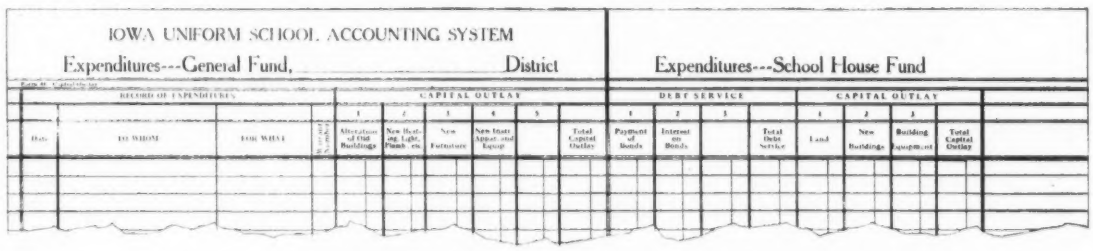

IOWA UNIFORM SCHOOL ACCOUNTING SYSTEM

Expenditures---General Fund, _____ District

RECORD OF EXPENDITURES | CO-ORDINATE AND AUXILIARY ACTIVITIES | FIXED CHARGES

Date | TO WHOM | FOR WHAT | Number | 1 Medical and Dental Insp. and Nurse | 2 Athletics and Forensics | 3 Books and Supplies for Pupils | 4 Garden, Playground, etc. | 5 TRANSPORTATION A Drivers' Salaries | B Other Expense | C Total Transportation | Total Co-ord. & Aux. Activ. | 1 Rents | 2 Repairs | 3 Taxes | 4 Capital Outlay | Total Fixed Charges

FORM 3 E. EXPENDITURES FOR CO-ORDINATE AND AUXILIARY ACTIVITIES.


IOWA UNIFORM SCHOOL ACCOUNTING SYSTEM

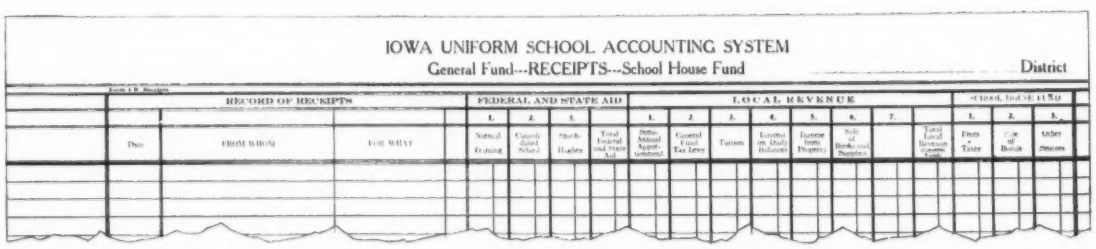
Expenditures---General Fund, _____ District

Expenditures---School House Fund

RECORD OF EXPENDITURES | CAPITAL OUTLAY | DEBT SERVICE | CAPITAL OUTLAY

Date | TO WHOM | FOR WHAT | Number | 1 Alteration of Old Buildings | 2 New Heating, Light, Plumbing, etc. | 3 New Furniture | 4 New Instr. Appar. and Equip. | 5 | Total Capital Outlay | 1 Payment of Bonds | 2 Interest on Bonds | 3 | Total Debt Service | 1 Land | 2 New Buildings | 3 Building Equipment | Total Capital Outlay

FORM 4 E. EXPENDITURES FOR CAPITAL OUTLAY AND DEBT SERVICE.


IOWA UNIFORM SCHOOL ACCOUNTING SYSTEM

General Fund---RECEIPTS---School House Fund _____ District

RECORD OF RECEIPTS | FEDERAL AND STATE AID | LOCAL REVENUE | OTHER SOURCES

Date | FROM WHOM | FOR WHAT | 1 Normal Training | 2 County Aid for Schools | 3 Math. Higher | Total Federal and State Aid | 1 State Annual Appropriation | 2 General Fund Tax Levy | 3 Tuition | 4 Interest on Daily Balances | 5 Income from Property | 6 Sale of Books and Supplies | 7 | Total Local Revenue (Gen. Fund) | 1 From Taxes | 2 Sale of Bonds | 3 Other Sources

FORM 1 R. RECEIPTS FROM ALL SOURCES.

far too elaborate and detailed to pay for the time involved. Again, many larger districts were found where essentially the only book used in the accounting system was the warrant book, from whose stubs the secretary would make the reports required.

As many as ten different arrangements of the system were made before the office of the attorney general, the office of the department of public instruction, the office of the director of the budget, and the many school officers connected would place the final approval on the system as proper and acceptable.

When the system was finally completed, a bulletin was prepared taking up in much detail each item and almost each word on each form. This bulletin takes up the items by form and number, explains the use of each part of the system in detail and explains the proper procedure in each case giving cautions where they are necessary and setting out the legal requirements and limitations of each part of the system. The bulletin serves a dual purpose—it is an informational bulletin introducing the use of the system and is also a manual or handbook to be used at all times.

By statute, Iowa school districts are held to only two most used funds, General and Schoolhouse, which explain themselves by their very terms. Separate appropriation must be made for each fund and no overlapping is permitted by Iowa law, nor any transfer of funds, except as approved by the Director of the Budget. Within each fund, however, distribution can be made and is made as guided by the Iowa Uniform School Accounting System. Transfer within the legal funds is permitted at the discretion of the board at any time, under the regulations of the accounting and budgetary plan.

The official Iowa Uniform School Accounting System is made up of ten specific forms, only eight of which must be used at all times and two which may be used as the occasion demands. Four forms are for expenditures, one for receipts, one for summary and recapitulation, one warrant form (distributive type), one bond register and one bond file and record and one internal budget. The sheets are 14" by 17", kept in an ordinary post binder which permits much elasticity. Nonofficial sheets for inventory record, tuition record, minutes of meetings, etc., are made to fit the same size binder so the whole financial and also word picture of the activities of a district may be kept between the covers of one book of the secretary. The secretary and treasurer keep records precisely the same, in exactly the same type of book. How they keep together will be explained later. The sheets of the 14" by 17" size are what we call unit sheets or exactly the same on one side as on the other.

The general scheme of the system, as the facsimiles of the forms appearing in connection with this article will show, is along the general line of the plan recommended by the National Education Association and the United States Commissioner of Education, with such changes made as to fit the system to the needs of the Iowa schools. All unnecessary forms have been eliminated, and unused or little-used items have been left out for the sake of simplicity.

All efforts have been made to make the system as simple and usable as possible, yet complete and comparatively scientific for all intents and purposes. The voucher system is not used. There are no folio numbers, code numbers, or masses of detail of the sort included.

Facsimiles of the forms appear in connection with this article and the smaller details of each department will not be taken up in detail here, for they can be readily identified from the facsimiles. Moreover, no elaborate explanation can be given here of the reasons for what may appear to be inconsistencies or omissions, for it would take more space to give reasons for all variations than would fill this issue of THE SCHOOL BOARD JOURNAL. Every omission or addition has been made for a reason and that reason has been to make the Iowa Uniform School Accounting System the best, most comprehensive, yet the most simple and effective system that could be fitted to the peculiar needs of the school districts of the state of Iowa.

The Iowa Uniform School Accounting System does not apply to the larger city school districts because the detail they require has not been provided for in the system. Other arrangements have been made for their uniformity. The Iowa system is made to meet the need of approximately 900 of the 933 consolidated and independent districts in the state; the 33 exceptions approximately comprise the larger city systems of the state. Hence some omissions can be easily understood. For instance, there were perhaps no more than thirty districts in the state of Iowa that have any expense in compulsory attendance, so that item was eliminated from the system.

Following is a list of the forms and what appears on each:

Form 1E—
Administration
1. Secretary Salary
2. Secretary and all Board Supplies
3. Superintendent's Office Supplies
4. Telephone and Telegraph
5. All Clerical Service
6. —vacant to meet local need

TOTAL ADMINISTRATION

Instruction
1. Male Teachers
2. Female Teachers
3. All Instruction Supplies
4. Supplementary and Library Books
5. Commencements, Exhibits, etc. (Instructional)
6. Free Textbooks
7. —left vacant to meet local need

TOTAL INSTRUCTION

Form 2E—
Operation
1. Janitor Salary and Extra Labor
2. Janitor Supplies
3. Fuel
4. Light and Power
5. Water
6. Freight, Express, and Drayage
7. —vacant to meet local need

TOTAL OPERATION

Maintenance
1. Repair of Buildings
2. Upkeep of Grounds
3. Repair and Replacement of Furniture
4. Repair and Replacement of Service Systems
5. —vacant to meet local need
6. —vacant to meet local need

TOTAL MAINTENANCE

Form 3E—
Coordinate and Auxiliary Activities
1. Medical and Dental Inspection, Nurse Service
2. Athletics and Forensics (only as authorized by law)
3. Books and Supplies for Re-Sale
4. Garden, Playground, etc.
5. —vacant to meet local need
6. Transportation
   - A. Drivers' Salaries
   - B. Other Expense
   - C. Total Transportation

TOTAL COORDINATE AND AUXILIARY ACTIVITIES

Fixed Charges
1. Rents
2. Insurance
3. Taxes
4. Contingencies

TOTAL FIXED CHARGES

Form 4E—
Capital Outlay (General Fund)
1. Alteration of Old Buildings
2. New Heating, Lighting, Plumbing, etc.
3. New Furniture
4. New Instruction Apparatus and Equipment
5. —vacant to meet local need

TOTAL CAPITAL OUTLAY (General Fund)

SCHOOLHOUSE FUND
Debt Service
1. Payment of Bonds
2. Interest on Bonds
3. —vacant for local need

TOTAL DEBT SERVICE

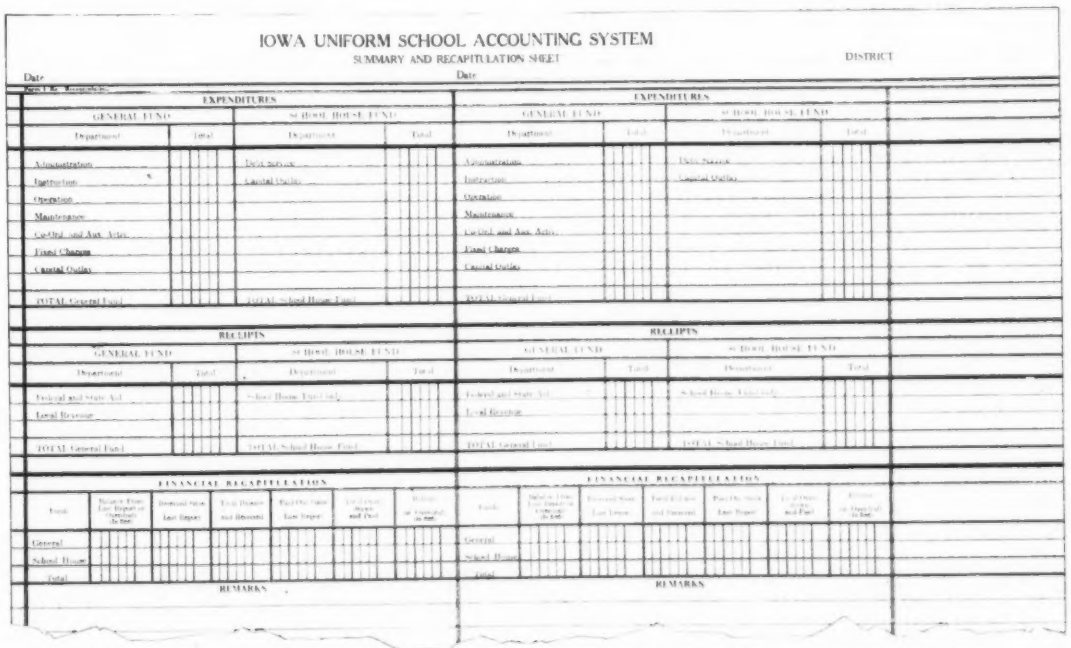
Capital Outlay (Schoolhouse Fund)
1. Land
2. New Buildings
3. Building Equipment

TOTAL CAPITAL OUTLAY (Schoolhouse Fund)

As the items show, capital outlay is permitted by the Iowa law under both funds, yet each type of expenditure is well defined.

The total column is included at the close of each department as a device for checking. When the page is finished, the totals of columns and totals of departments must be drawn to carry forward. If the sum of the column totals in and one department on one page does not check exactly with the department total as indicated by the last column in each department then a mistake has been made and the mistake must be found before carrying the column totals forward to the next page. This device keeps each page correct and avoids checking back over a mass of material at the time of closing the books, if a mistake is discovered then. Each page will present its own mistakes which must be corrected before proceeding to the next page.

On each of the above sheets the first or left hand side of the page carries—Date, To Whom



FORM 1 RE. SUMMARY AND RECAPITULATION OF ALL RECEIPTS AND EXPENDITURES.

TREASURER

No.

Department	Sec. No.	Amount
General Fund		
Administration		
Instruction		
Operation		
Maintenance		
Co-Ord and Aux		
Fixed Charges		
Capital Outlay		
School House Fund		
Debt Service		
Capital Outlay		

ADDRESS

MARQUETTE, IOWA, ... 19..... $.....

INDEPENDENT DISTRICT OF MARQUETTE, IOWA

TO THE SCHOOL DISTRICT TREASURER

PAY TO ..... OR ORDER

THE SUM OF ..... DOLLARS

BY ORDER OF THE BOARD OF DIRECTORS

..... PRESIDENT

..... SECRETARY

PAYABLE AT

..... BANK, ... IOWA

SCHOOL WARRANT

Claim No..... No.....

Date..... 19.....

To.....

On Acc't.....

.....

.....

.....

Rec'd Warrant

.....

Department	Sec. No.	Amount
General Fund		
Administration		
Instruction		
Operation		
Maintenance		
Co-Ord and Aux		
Fixed Charges		
Capital Outlay		
School House Fund		
Debt Service		
Capital Outlay		

STUB OF SCHOOL WARRANT

FORM FOR SCHOOL WARRANTS.

BOND FILE AND RECORD

A Permanent File for Paid and Cancelled Bonds and Coupons

Kind of Bond ..... Series ..... No.

Description ..... Amount of Bond, $

Date of Issue ..... Date Due ..... Interest @ ..... Per Cent Per Annum

Where Payable ..... Payable ..... on the ..... day of

Date Called ..... Date Paid

Coupon No. $	Coupon No. $	Coupon No. $	Coupon No. $	Coupon No. $
Coupon No. $	Coupon No. $	Coupon No. $	Coupon No. $	Coupon No. $
Coupon No. $	Coupon No. $	Coupon No. $	Coupon No. $	Coupon No. $
Coupon No. $	Coupon No. $	Coupon No. $	Coupon No. $	Coupon No. $

FORM FOR KEEPING BONDS AND COUPONS PAID.

Bond Register

No. of Bonds ..... Kind ..... Sold to ..... P. O. Address .....

Series No. ..... Total Amount $ ..... Date Issued ..... 19 ..... Date Due ..... 19 ..... Rate of Interest ..... per cent

Payable ..... Annually on ..... No. Coupons ..... Amount of Each $ ..... Where Payable .....

Issue Pay. Int. & Cits and Twsp. Taxes, and Loeb. Consols Auditing and Legal ... Schools Twsp. and Twp. Subsid. Acts, 1907, Chap. 68, Code of 1924 ... City or Town, Acts No. 8163 and 8782, Code 1924 ... Consols No. 1281, Code 1924

RECORD OF BONDS

Bond Number	Amount	Remarks or Name and Purpose	Date Due Month	Date Due Day	Date Due Year	Date Cancelled Month	Date Cancelled Day	Date Cancelled Year	Amount of Coupon

RECORD OF COUPONS

Coupon No. 1 Due	Coupon No. 2 Due	Coupon No. 3 Due	Coupon No. 4 Due	Coupon No. 5 Due	Coupon No. 6 Due	Coupon No. 7 Due	Coupon No. 8 Due	Coupon No. 9 Due	Coupon No. 10 Due	Coupon No. 11 Due	Coupon No. 12 Due	Coupon No. 13 Due	Coupon No. 14 Due	Coupon No. 15 Due
19	19	19	19	19	19	19	19	19	19	19	19	19	19	19

FRONT OF BOND REGISTER FORM.

Loan Use Purpose .....

Remarks .....

Record of Issue Book ..... Page .....

RECORD OF COUPONS

Coupon No. 16 Due	Coupon No. 17 Due	Coupon No. 18 Due	Coupon No. 19 Due	Coupon No. 20 Due	Coupon No. 21 Due	Coupon No. 22 Due	Coupon No. 23 Due	Coupon No. 24 Due	Coupon No. 25 Due	Coupon No. 26 Due	Coupon No. 27 Due	Coupon No. 28 Due	Coupon No. 29 Due	Coupon No. 30 Due	Coupon No. 31 Due	Coupon No. 32 Due	Coupon No. 33 Due	Coupon No. 34 Due	Coupon No. 35 Due	Coupon No. 36 Due	Coupon No. 37 Due	Coupon No. 38 Due	Coupon No. 39 Due	Coupon No. 40 Due	Coupon No. 41 Due	Coupon No. 42 Due	Coupon No. 43 Due	Coupon No. 44 Due	Coupon No. 45 Due	Coupon No. 46 Due	Coupon No. 47 Due	Coupon No. 48 Due	Coupon No. 49 Due	Coupon No. 50 Due	Coupon No. 51 Due	Coupon No. 52 Due	Coupon No. 53 Due	Coupon No. 54 Due	Coupon No. 55 Due	Coupon No. 56 Due	Coupon No. 57 Due	Coupon No. 58 Due	Coupon No. 59 Due	Coupon No. 60 Due
19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19

BACK (PART) OF BOND RECORD FORM.

(warrant is issued), For What (warrant is issued), and Warrant Number. From this point then the distribution carries on as has been explained.

Form 1R—

Receipts

Federal and State Aid

1. Normal Training
2. Consolidated School
3. Smith-Hughes

TOTAL FEDERAL AND STATE AID

Local Revenue

1. Semi-Annual Apportionment
2. General Fund Tax Levy
3. Tuition
4. Interest on Daily Balances
5. Income from Property
6. Sale of Books and Supplies
7. —vacant to meet local need

TOTAL LOCAL REVENUE (General Fund)

Schoolhouse Fund

1. From Taxes
2. Sale of Bonds
3. Other Sources

It will be noted here that the same device for checking within departments also prevails. The Schoolhouse fund is a part of Local Revenue, yet a distinct part. No total of the schoolhouse fund is provided. Column totals only are carried in this case, for arrangement is made on the internal budget blanks, where this material is used, that it works itself out correctly.

At the left of the sheet of Receipts appears—Date, From Whom, For Whom, and a blank column for any identification desired by the secretary.

Form 1Re—Summary and Recapitulation

This form takes up first a summary of the receipts and expenditures of both funds in the same manner and order as the department totals have been recorded on the ledger sheets. Finally, the totals received in the summary are taken to the part of the sheet on which the recapitulation is made. This recapitulation can be made every day, every week, every month, every three months, or every six months, as directed by the board of education. According to law it must be made twice a year.

Two recapitulations can be made to a page and four to a complete sheet. At the foot of each summary and recapitulation appears a space for remarks to explain any irregularities or any other explanation the secretary wishes.

Form 1W—Warrant

This form is the official warrant form that is fitted with a space for distribution on the stub and on the warrant itself and exactly fits the rest of the system—in fact, is the keynote of the entire system. Distribution is made both on the warrant itself and on the stub exactly the same. The face of the warrant appears at the right and that portion of it appears the same as any other warrant that has been used in the past. At the left side of the warrant and on the right side of the stub appears the names of each department, the same as it appears in the summary or the same, and in the same order, as the department totals come in the ledger. The spaces are ruled off and have a space for the section number of the department and a space for the amount to be placed opposite each department and section thereof. The warrant form may be officially made as the one shown in the facsimile or it may be made with interleaves attached to the covers and a carbon sheet can be used. In this case no stub appears, for the attached carbon copy serves as the stub.

The secretary writes the face of the warrant as always and then makes the proper distribution of the total, as the expenditure goes to the particular department. When this distribution is made both on the warrant and on the stub, then the warrant is detached and sent out. The secretary makes his record from the stub and carries the expenditure to the proper place in the ledger. When the treasurer receives the warrant presented for payment, he makes his distribution to his ledger from the distribution on the warrant made by the secretary. This seemingly unimportant device is of untold value in keeping the records of the treasurer and the secretary precisely the same. No mistake in distribution is possible as between the secretary and treasurer. The treasurer refuses to pay any warrant not properly distributed. Hence it returns to the secretary for distribution and back to the treasurer in proper form. With this device, it is possible for the books of the treasurer and secretary to always check in every detail. Mistakes of the clerical type are very readily located and adjusted.

Form 1B—Bond Register

This form is arranged for a record of bonds and is used only when a bond record is necessary.

Form 1BF—Bond File and Record

This is a heavy card sheet arranged with small oblong sections where bond coupons may be pasted and record kept thereof. This, too, is not necessary in all cases.

Form 1IB—Internal Budget for Schools

This is the final official form of the system and is the culmination or ultimate aim of the entire system. This form is arranged for reporting each year the financial story of the school district and is arranged for the convenience of the secretary and superintendent and also for the information of board members. It lists each of the departments of receipts and expenditures and the various sections under each. Opposite each of the sections is space to record the totals of what occurred in each section during the past year in one column, and a second column is provided for estimates of receipts and expenditures of each section during the coming year, using the past experience as a basis for estimating.

First, the column totals of the year in each section are copied into column one in the proper space provided. When this is done, the superintendent and secretary in conjunction, or perhaps the finance committee of the board of education, consider each item carefully and make the estimate for the coming year opposite each proper space. Each item estimated is carefully considered before writing in the estimate. When this work is complete, tentative copies are submitted to the board beforehand and at a meeting, after they have considered the matter,

(Continued on Page 188)

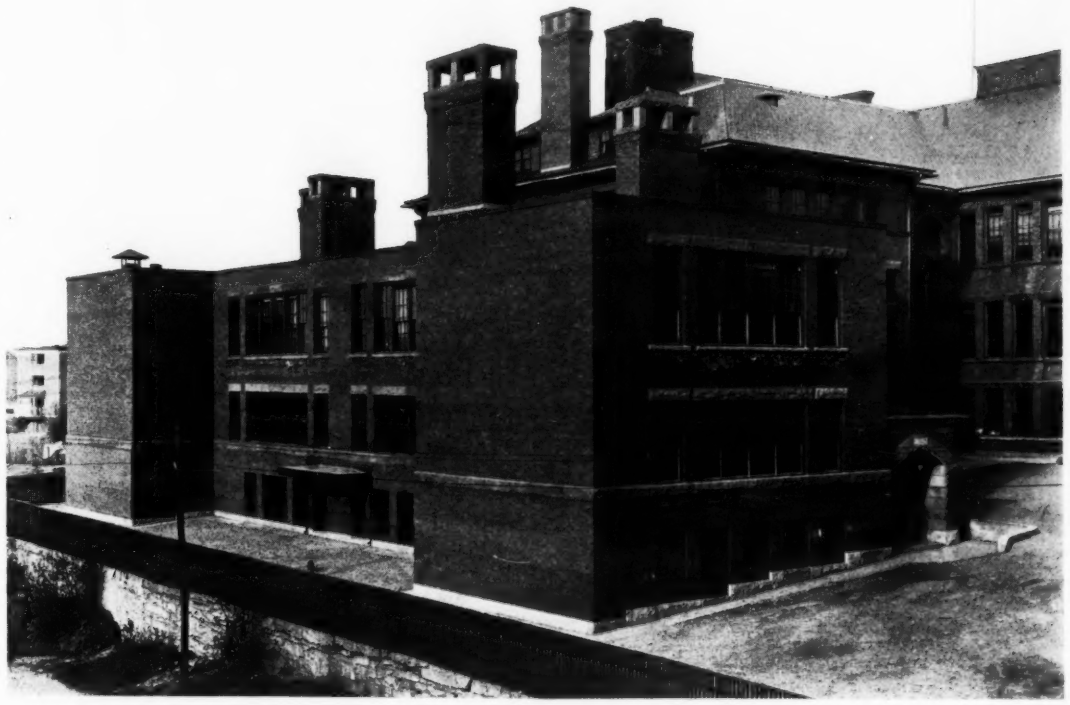
REMODELING OLD SCHOOL BUILDINGS IN WORCESTER

Arthur J. Peel

The city of Worcester, Massachusetts, has the distinction of being one of the best "schooled" cities in the country. With a population of less than 200,000, the value of school property and land, totals nearly seven million dollars, while the total expenditure for all purposes exclusive of buildings and improvements, is over three million dollars per annum. So strong and highly developed is the public appreciation of the importance of public education in Worcester, that I was told by a city official of high standing, that the mayor was practically elected on a school building program.

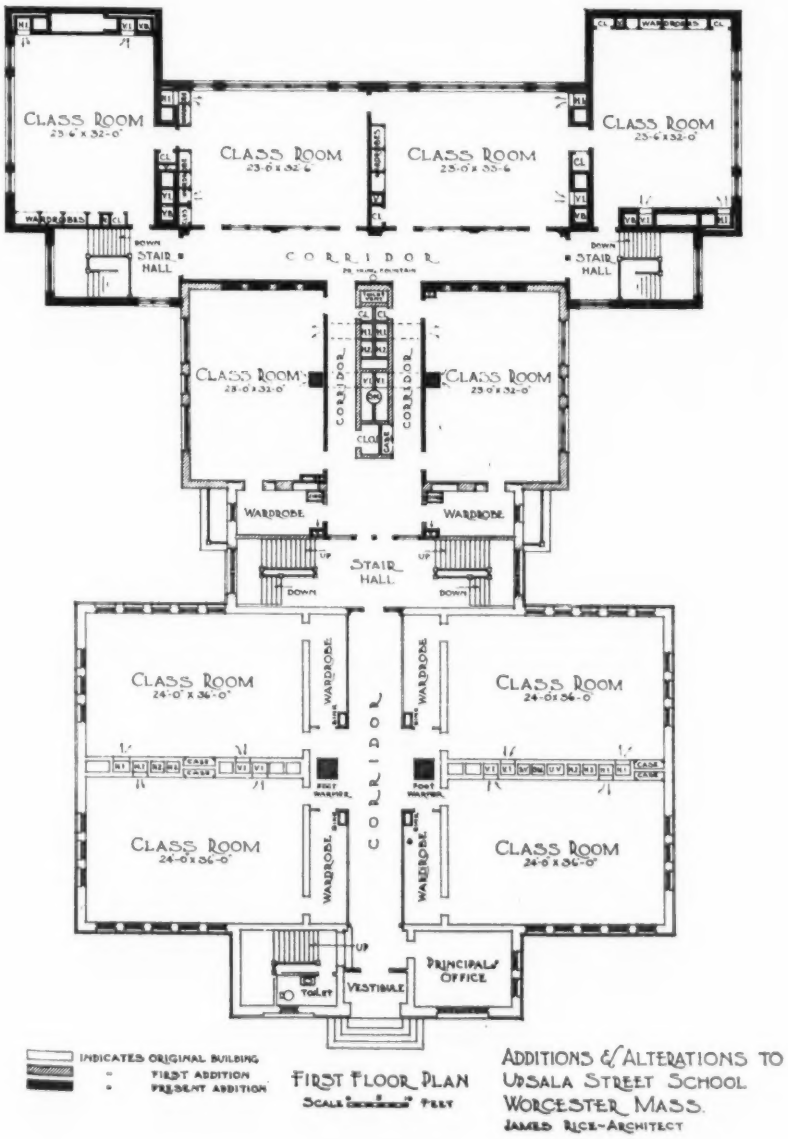
Worcester is fortunate in having as public school superintendent, a man who has been identified with the public education work of the city for over 38 years. Mr. Walter S. Young, on his graduation from Dartmouth, was appointed to the teaching staff of the junior high school. From that position he has worked his way to the position of public school superintendent. After serving in this capacity for three years, he has now received a life appointment, and his record fully justifies the confidence that, in this way, has been shown in him by the school committee.

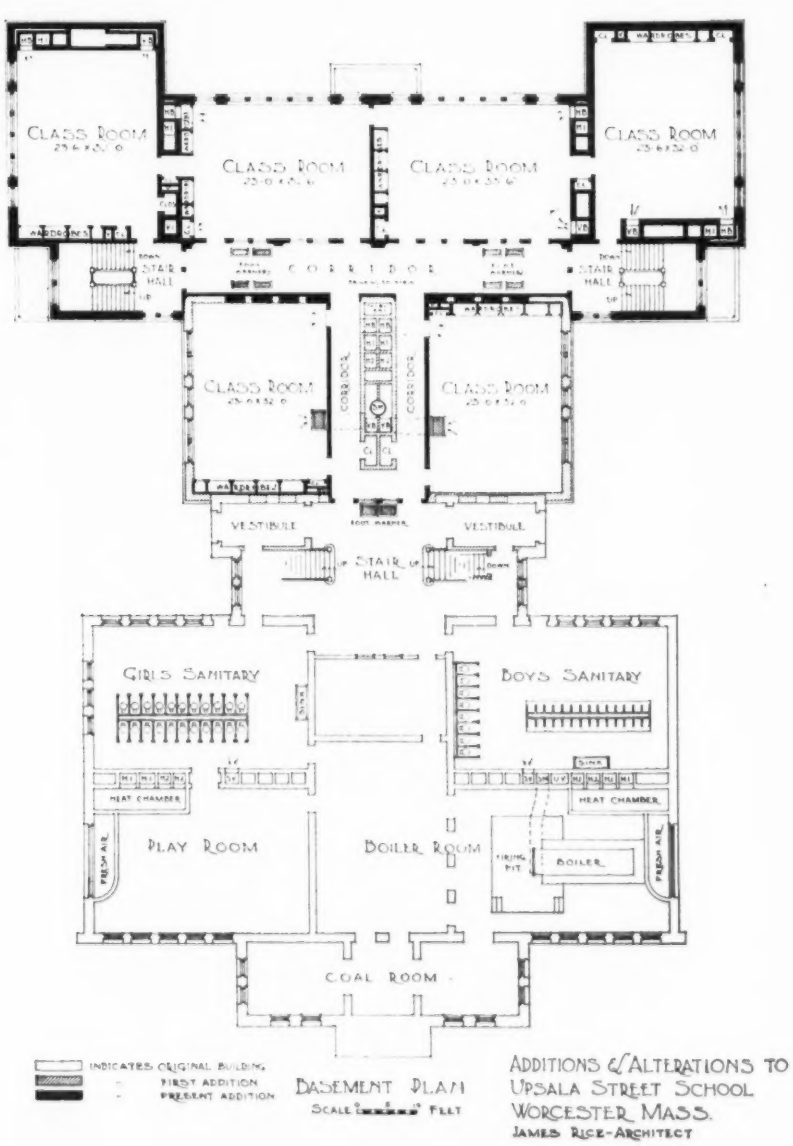
Until two years ago there was a serious shortage in school accommodations in Worcester, and many children were on part-time schedule. The problems that faced the administration were those of finance, and conflicting views on construction. Projects for disposing of some old school properties and rebuilding on other sites, were advanced at the city hall, while others, with a view to economy without a sacrifice of efficiency, advocated various additions and improvements to existing buildings. In this, of course, we have nothing unusual, it is an old story told and retold in every school community. An interesting feature in this connection is, however, that certain remodeling schemes were put over in the face of much opposition, and in spite of the opinion of architects and contractors that the schemes were not practicable nor economical.



UPSALA STREET SCHOOL, WORCESTER, MASS. James Rice, Architect, Worcester, Mass.

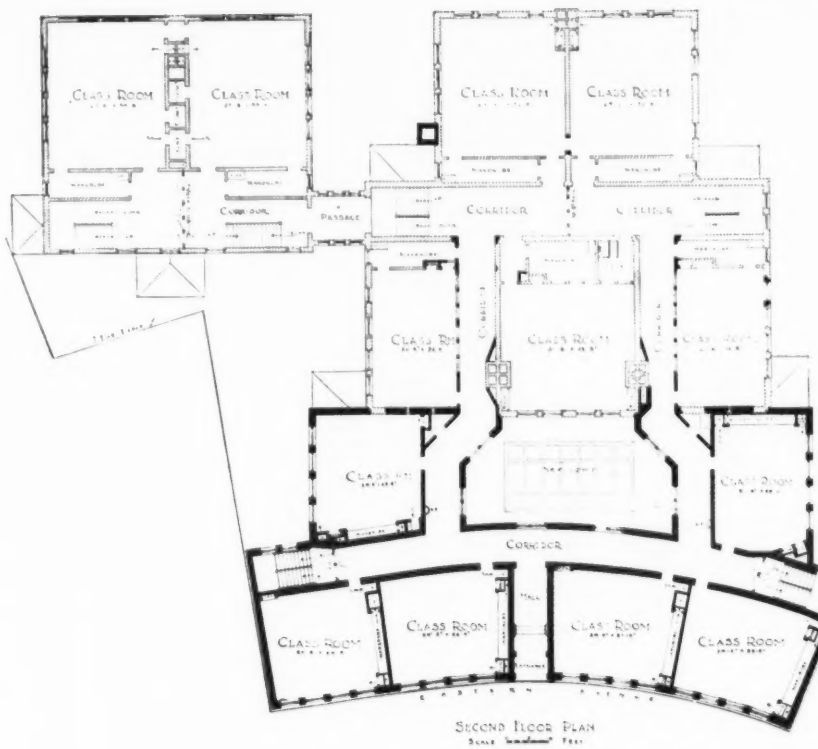
Much has been said and written on the subject of dual control in public school matters. In Worcester there is a very distinct cleavage of responsibility; all public school buildings and their maintenance and repairs, are under the jurisdiction of the superintendent of buildings; while the administration of the schools and all that pertains thereto, is under the control of the superintendent of public schools. There are numerous cases where such dual control has been a real handicap to proper and efficient school administration, but this cannot be said to be the case in Worcester. In the case referred to above, it was the superintendent of

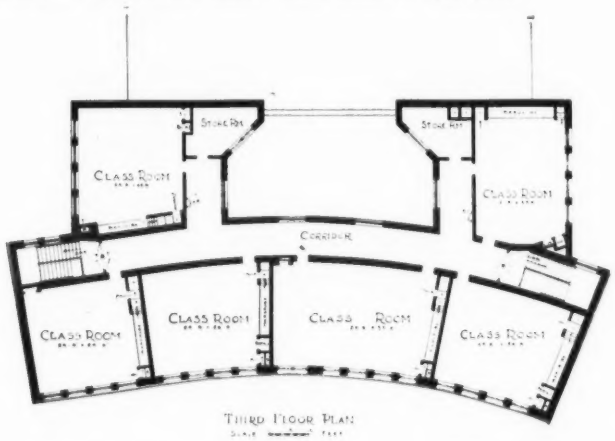


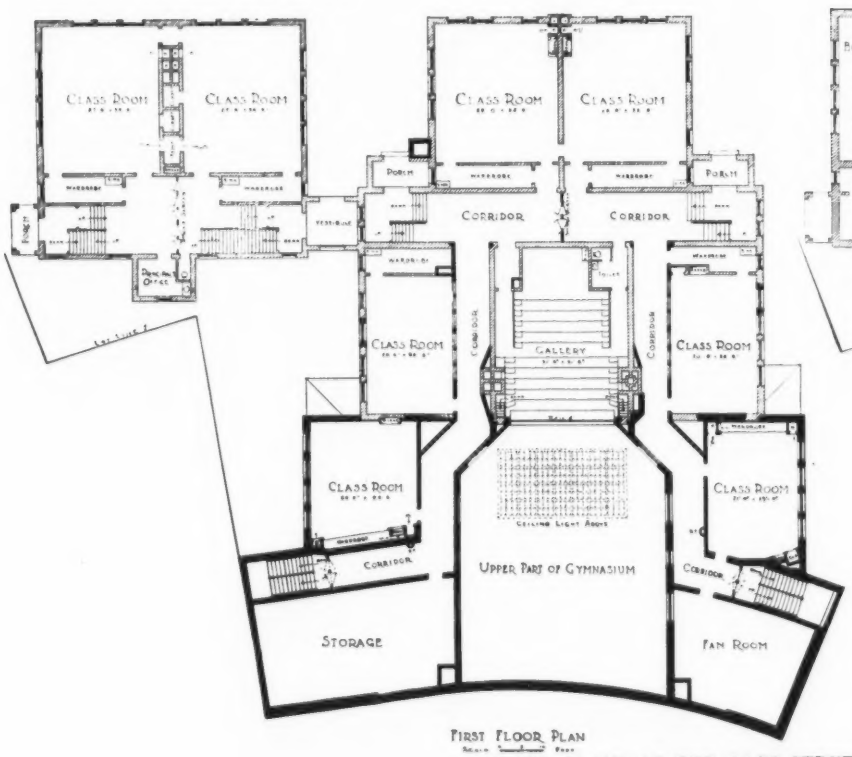


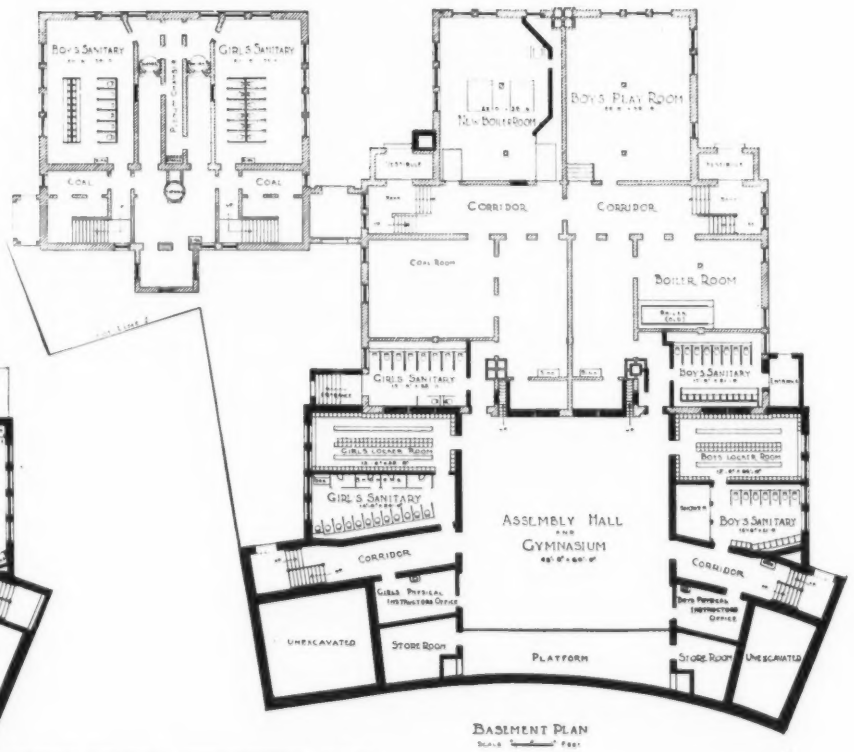
GAGE STREET SCHOOL, WORCESTER, MASS. James Rice, Architect, Worcester, Mass.

buildings who aligned himself with the superintendent of public schools, against an array of "authorities" who stated emphatically that one particular school, known as the Gage Street School, could not be remodeled to meet modern conditions. But more than this, it was the building superintendent who prepared the plans, proving that additional accommodations and remodeling were practical for the Gage Street school. Today the school stands as a monument to persistent effort and definite purpose.









FLOOR PLANS OF THE GAGE STREET SCHOOL, WORCESTER, MASS.
James Rice, Architect, Worcester, Mass.

BLITHEWOOD AVENUE SCHOOL, WORCESTER, MASS

Samuel H. Pitcher and Co., Architects, Worcester, Mass.

What the architects and the contractors said was not possible, the superintendent of public buildings proved to be not only possible, but eminently practical and pleasing.

In order that we may appreciate just the difficulty which the advocates of remodeling as opposed to rebuilding on another site, had to contend with, it would be well to examine the plans shown. The shape of the lot was very irregular, but in addition to this, the ground on which now stands the additional building, was a steep grade to the foot of the old building. All this had to be leveled and then excavated, before any additional building was possible. What was actually accomplished is plainly seen by studying the accompanying plans and front view of the addition.

By this means one of the oldest schools in Worcester, quite inadequate in its original form to meet requirements, has been transformed into a modern school with facilities peculiarly advantageous to a foreign population —for it happens that this school is in an Italian section. For many of the youngsters, the shower baths at the Gage Street school is the only opportunity they have for a real bath. The assembly hall and gymnasium is used not only for pupils, but is rented out for community purposes, thus providing a very convenient medium for community endeavor. All the classrooms are standardized, that is, they are arranged to seat 38 pupils, and are fitted with lockers, coat and hat rails.

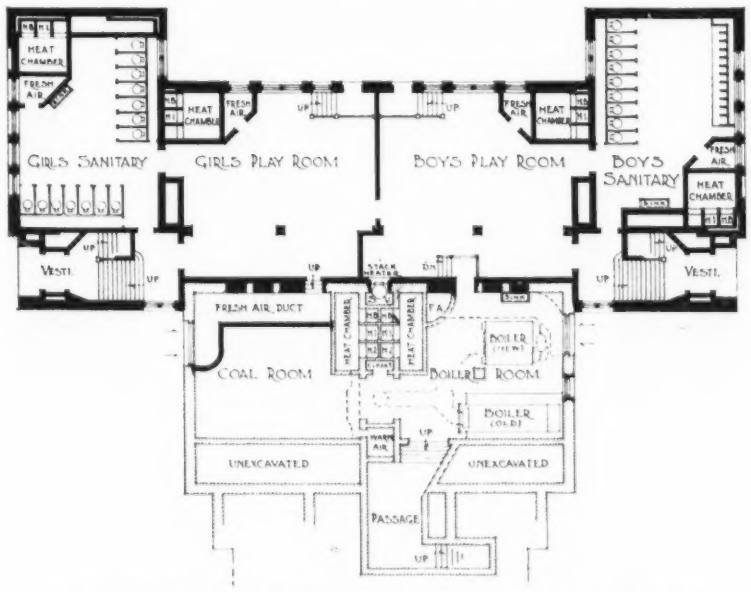
The cost of remodeling, and additional building, according to Mr. Young, is around $18,000 to $19,000 a room. In the case of the Gage Street school, considerable alterations were made in the old building. For instance, the old heating system was entirely removed and a modern heating plant installed. The total cost of the Gage Street addition was approximately $118,000.

Another interesting piece of remodeling work is to be seen in the Upsala school. This addition cost around $131,000. In this building also, an entire new heating plant was installed, at a cost of nearly $11,000.

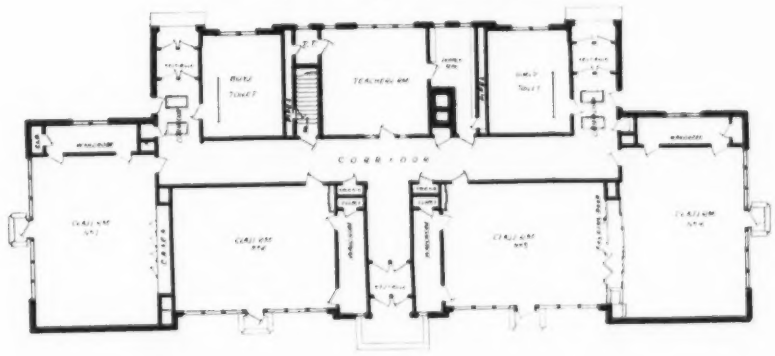
Both of these schools, remodeled within the past two years, are splendid examples of what may be accomplished with old buildings in congested areas at a relatively small expenditure of money. The harmonious cooperation between the school department and building department in the city of Worcester, has made possible this economy.

Wardrobes are located on the first and third floors. These will accommodate 500 pupils, while lockers in the dressing rooms in the basement provide further space. The wardrobes are so arranged that they may be locked during school hours.

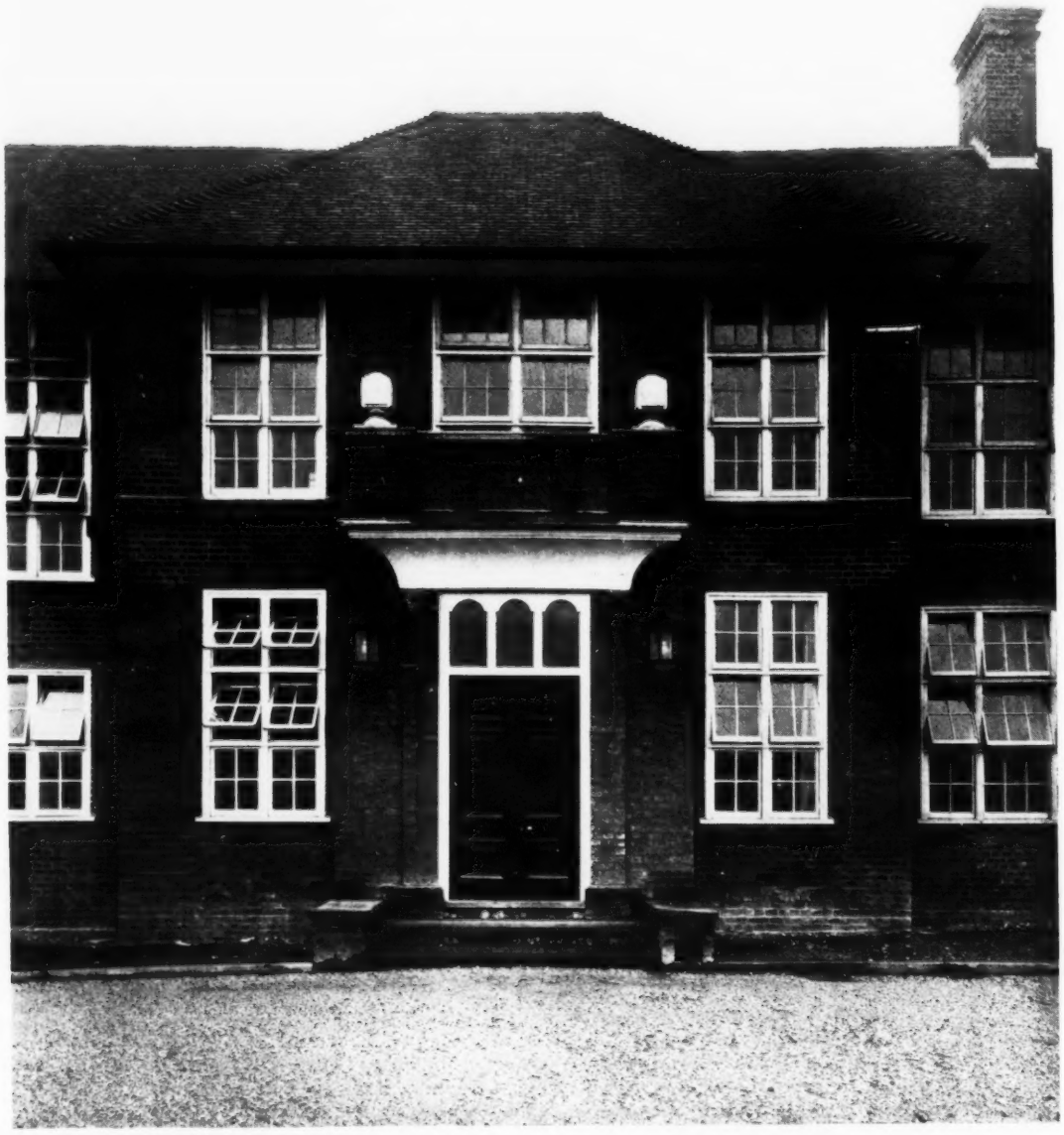
The Blithewood Avenue schoolhouse is one of the newer buildings erected in Worcester and is a splendid type of development of the one-story schoolhouse. The building was erected in 1924 from plans prepared by Samuel H. Pitcher & Company, Architects, Worcester, Mass. The general contract for construction amounted to $40,500; the heating and ventilation cost $6,170; the plumbing and sanitary work amounted to $2,900; and the electrical contract for lighting amounted to $1,155. The total cost of the building, including furniture, etc., was approximately $55,000.



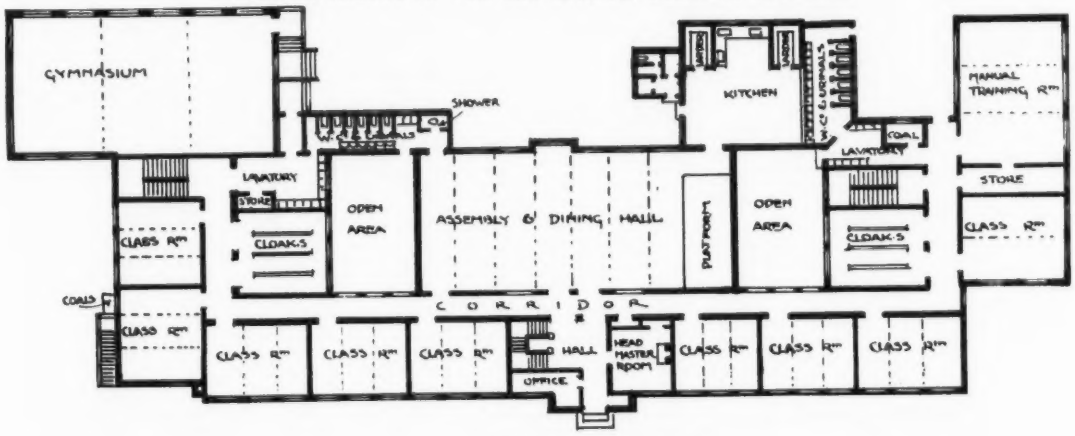
BASEMENT PLAN OF THE UPSALA SCHOOL, WORCESTER, MASS.
SECTION IN SOLID BLACK IS THE LATEST ADDITION.
James Rice, Architect, Worcester, Mass.

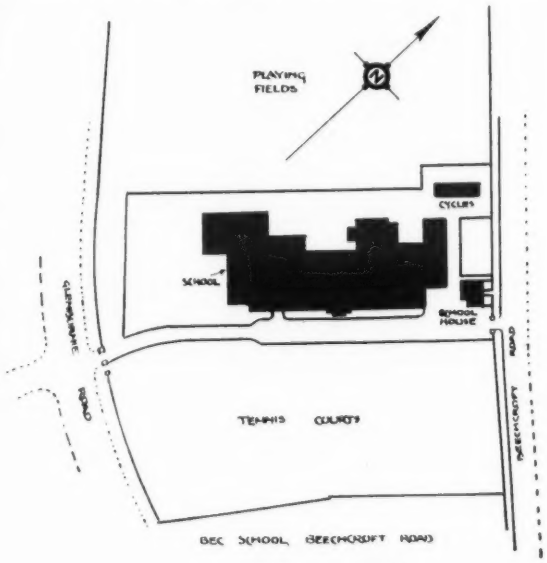


FLOOR PLAN
BLITHEWOOD AVENUE SCHOOL, WORCESTER, MASS.
Samuel H. Pitcher and Co., Architects, Worcester, Mass.



MAIN ENTRANCE OF THE BEC SCHOOL, LONDON, ENGLAND.





BEC SCHOOL, LONDON, ENGLAND. Mr. G. Topham Forrest, Architect.

THE FIRST SECONDARY SCHOOL IN LONDON ERECTED SINCE THE WAR

Bec Secondary School

By John Y. Dunlop

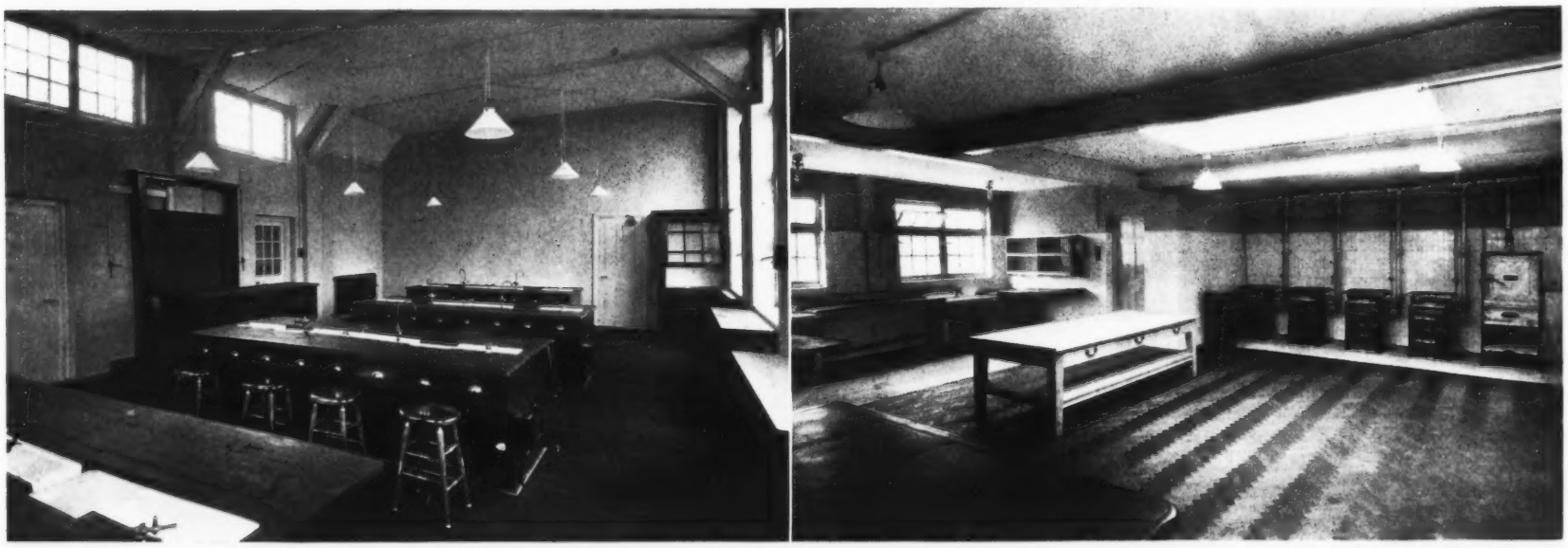
Building statistics throughout England reveal the great demand for schools for the ever-growing needs of education.

Since the war building construction has been slow and costly, with the result that the educational authorities have put off to the last minute what are the pressing momentary needs of the communities. Now, however, many new schools are in contemplation and it is quite safe to say that from now onward, school construction will be first in the building programs in this country.

The Bec Secondary School, which has been erected by the London County Council, is the first which has been completed in London since the war. It stands on a site of seven acres in Beechcroft Road, Tooting, and accommodates 500 pupils. Of the total area five acres have been laid out as playing fields. The cost, including site, building, and furniture, has been about £56,000.

The principal entrance admits directly to the assembly and dining hall, for some 200 of the pupils, with the classrooms grouped on both sides. The pupils' entrance and staircases are situated in the northern side of the building, with lavatory and toilets adjacent. A shallow wading pool in connection with the playing fields is also provided.

The corridor construction is of reinforced concrete. The stairs, of steel, with stone treads, are rigid and strong. The risers and treads are such that the going up and down is easy, considering that the majority of people using these stairs are young people. The stairs are of suf-



SCIENCE AND COOKING ROOM OF THE BEC SCHOOL, LONDON, ENGLAND.
Mr. G. Topham Forrest, Architect.

ficient width so that excess crowding is eliminated. All the steps are parallel and the landings extend across two flights.

The teaching accommodations comprise eighteen classrooms, all with southerly aspects. In addition to the classrooms the following rooms are provided:

Ground Floor.—Assembly and dining hall with kitchen quarters adjacent, gymnasium, manual training room, headmaster's room, and office for secretary.

First Floor—Library, art room, three science laboratories, and a staff common room.

The halls and staircases in the school building are convenient to the exits and of a size and arrangement that will properly safeguard the lives of children within the building, as well as provide ample accommodation for interchange of classes and other school purposes.

The building throughout is designed to provide a maximum of light and air and is adequately heated by the low-pressure hot-water system. The heating furnace is located in the basement and the capacity of the boiler is such that it allows for warmth with ventilation at all times, no matter what the state of the weather may be.

The building fabric is of brick, faced externally with red brick, and roofed with red tiles. The main entrance forms the central feature of the front, the remainder of which is divided into bays by the use of brick plasters.

The internal walls of the assembly and dining room, classrooms, and corridors have glazed tile dados, above which the walls are plastered and distempered. The floors of the assembly and dining room and corridors are laid with wood blocks, while the classroom floors are boarded and there is a special maple boarded floor in the gymnasium.

What strikes one most on walking through the sunny entrance of the Bec school into the assembly hall is the long line of windows which have a commanding view of the ideal cricket fields. Level and square as a card table and of very much the same color the carpet of new turf was of that satisfying extent which makes the walk from the pavilion to the wicket a heart-thumping adventure.

I have given an inventory of many parts of the wonderful arrangements of the Bec school. But I cannot forget the playing field. It seems to dominate every part of the school, for most of the rooms seem to look onto it or to give a glimpse of its fine, broad acres.

With the amazing sight comes the delicious humming rattle of a power-driven grass cutter. This is one of the accessories which one did associate with the playing fields of Hon and their kidney, and was to me prophetic, for was not this a community school built with nothing but the people's money and so that the artisan's son and the blackcoat's daughter would have the same opportunity for all-round development as the scions of the rich.

The Bec is also to have houses. Many of the eighteen classrooms can be converted by folding of partitions into large rooms for the transaction of house business.

The school has a first-year preparatory department, but the main school is for pupils 12 to 16 years and advanced courses. The fees from boys from the surrounding districts are 12 guineas for under 12 years, 15 guineas over. Other pupils pay 39 guineas a year. But the school will be open to scholarship winners and the clever boys from the most necessitous homes will have a chance with the rest.

The building has been designed in the architects' department, under the personal supervision of Mr. G. Topham Forrest, F.R.I.B.A., F.R.S.E., etc., chief architect to the Chief Architect to the Council.

STREET VIEW OF THE BEC SCHOOL, LONDON, ENGLAND.

ASSEMBLY AND DINING HALL AT THE BEC SCHOOL, LONDON, ENGLAND.

VIEW FROM THE TENNIS COURTS, BEC SCHOOL, LONDON, ENGLAND,
Mr. G. Topham Forrest, Architect.

LINCOLN ELEMENTARY SCHOOL, DISTRICT No. 170, CHICAGO HEIGHTS, ILLINOIS.

Wainwright, Vaughn & Co., Architects, Hammond, Ind.

THE LINCOLN ELEMENTARY SCHOOL, CHICAGO HEIGHTS, ILL.

Chicago Heights is located in the path of the southern expansion of the city of Chicago and at the point where the Lincoln and Dixie highways meet. It is one of the rapidly growing sections of Cook county. The main problem of the board of education is to make its housing facilities keep pace with the rapid increase in population, and to replace old and worn-out structures.

The erection of the Lincoln School was begun after a careful study of building needs of the present and future. The purpose was to provide a building with a maximum number of classrooms, arranged to accommodate future units containing additional classrooms, and other facilities.

The first unit of the structure occupies a ground area of 122′ 8″ by 61′ 4″. It is two stories in height and contains twelve classrooms, a teachers' room, an office, and four toilets.

The floor construction is entirely fireproof, consisting of concrete and hollow tile. The bearing walls are of brick and tile; the front entrance is press brick, with terra cotta trimming. The corridor floors and base, as well as the toilets, are of red and black-colored concrete. The stairs are of steel. The walls are sand-finish plaster in the classrooms; in the corridors and stair halls, the walls are decorated

The plumbing is of the most modern type, with heavy duty flush valves and white enamel metal toilet partitions. The heating plant is a split system, with direct radiation and a blower system in each room, with heat supplied by means of a steel boiler. Complete temperature control has been installed. Fire hose and cabinets are located on each floor and brass water piping is used throughout the building.

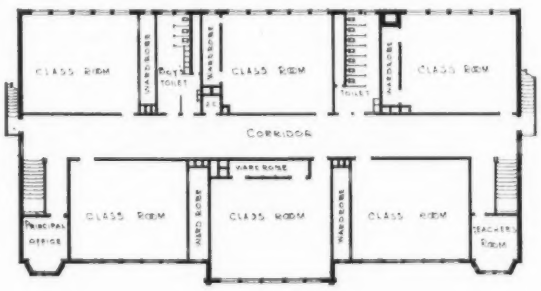
The building accommodates a total of 500 pupils, and cost complete, including architects' fees, lighting fixtures, and equipment, a total of $80,140, or 35 cents per cubic foot. Based on the number of pupils accommodated, the cost per capita was $160.28, or $6,678.33 per room.

The building was erected from plans prepared by Wainwright, Vaughn & Company, Architects, Hammond, Ind.

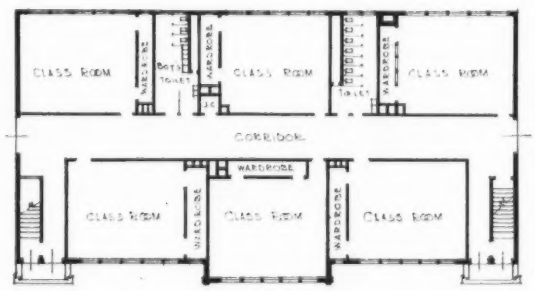
A CORRECTION

The Oak Park grade school at Aurora, Illinois, illustrated and described in the December number of "The School Board Journal," was erroneously reported to be equipped with a steam heating system.

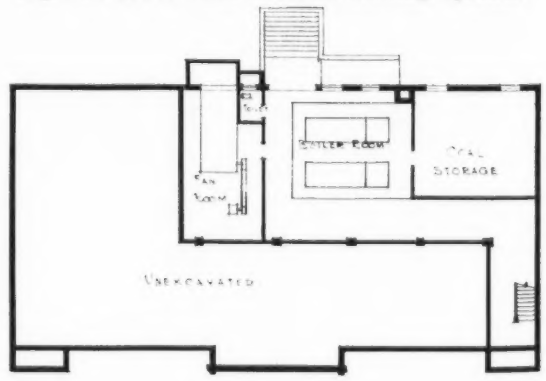
The building is equipped with a warm-air system of the most modern type. This has been found in the experience of the board of education to give satisfactory results, at an operating cost lower than a steam heating system.



Plan of Second Floor

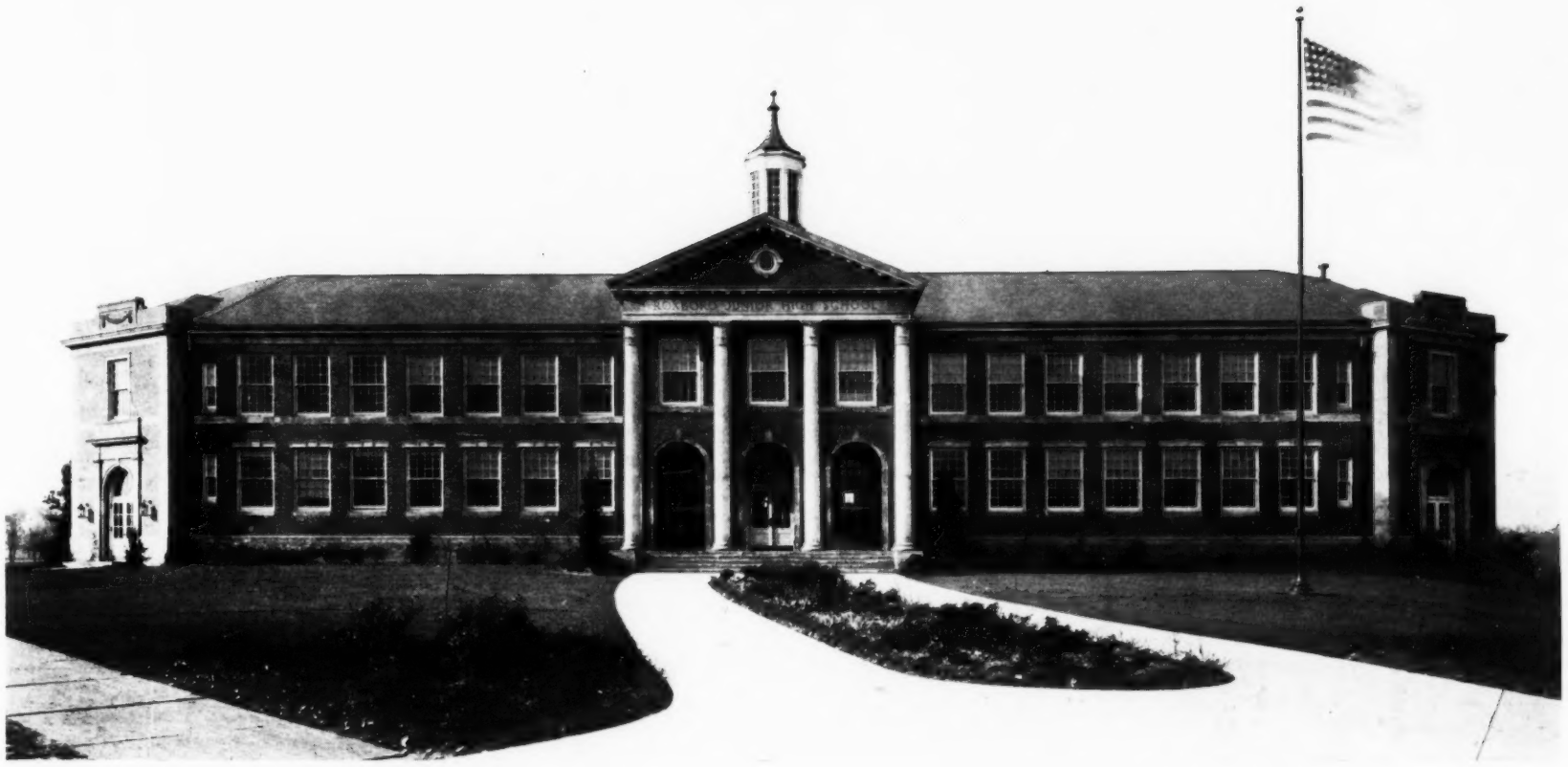


Plan of First Floor



Plan of Basement

LINCOLN ELEMENTARY SCHOOL, DISTRICT No. 170, CHICAGO HEIGHTS, ILL.
Wainwright, Vaughn & Co., Architects, Hammond, Ind.



ROXBORO JUNIOR HIGH SCHOOL, CLEVELAND HEIGHTS, OHIO. J. H. Graham and Co., Architects, Cleveland, Ohio.

IMPROVING DETAILS IN PRESENT SCHOOL PLANTS

Some Valuable Findings at Terre Haute, Ind.

The report of a survey of school sites and buildings, conducted at Terre Haute, Indiana, under the direction of Mr. Franklin Bobbitt, of the University of Chicago, devotes an entire chapter to the subject of "Improving Details in Present School Plants." The article brings out the fact that buildings may be improved not only by providing new facilities through construction, but also by improving the details of structures already in use. In Terre Haute, much has been done in insulating boilers and pipes, in installing improved artificial lighting fixtures, in placing slate blackboards in schools, and bulletin boards in elementary classrooms, in installing a modern type of fixtures and sanitary arrangements in toilet rooms, and in painting the interior of classrooms.

In formulating a program for caring for details of this character, the school authorities kept in mind the fact that the school plants are the best possible living places of the children, considering the financial situation and all the circumstances. It was the belief that everything possible should be done to make the buildings light, bright, airy, clean, sanitary, comfortable in temperature and ventilation, free from fire hazards, and with everything conveniently located and arranged.

In accomplishing these results the report suggested that there are many things that ought to be done:

"1. The heating-ventilation system in each building should be made as efficient as practicable. Since such a variety of systems are employed, each building needs to be studied and plans made according to the nature of the system.

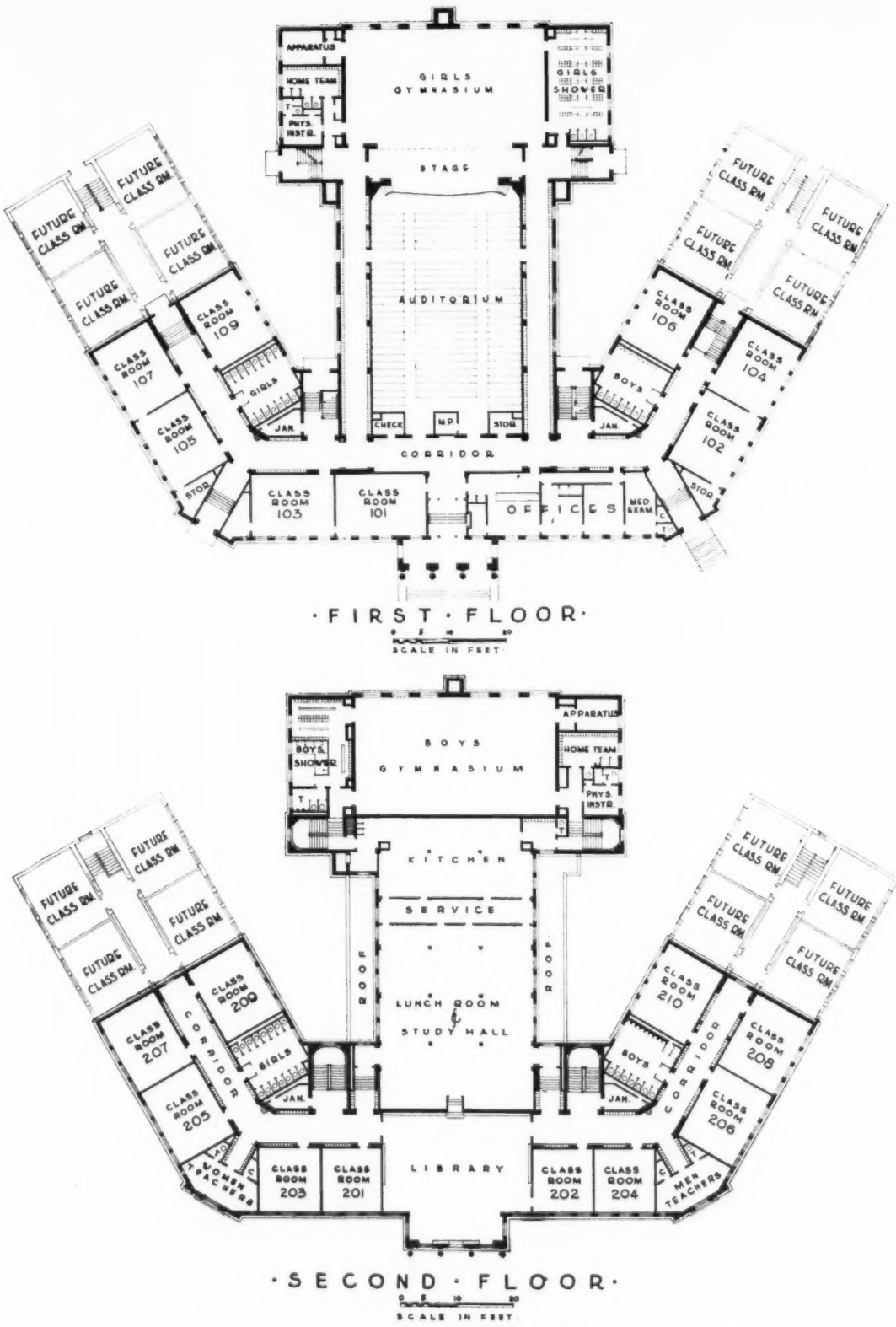
"Where the gravity system is used, the fresh air intake should be not down on the dust level, but should be from a point at least fifteen feet above the ground. The intake ducts should be as large as practicable. Since all ducts and flues throughout a building where the gravity system is used are too small, obstructions should be removed as completely as possible. Because of the inadequacy of all the gravity systems, the rooms in those buildings have to depend largely upon direct radiation and window ventilation.

"Where the blast system of heating and ventilation is employed, the thermostat and control valves should be made to work with certainty and efficiency. In some of the buildings having this system, the temperatures and ventilation have been very bad. This is the system which is employed in practically every first-class building. When properly operated and managed it is a good system. Apparently all of the thermostatic control apparatus needs to be renewed and kept in good working order. In a city with such an unusual amount of soot and smoke, it is necessary that arrangements be made for washing the air before it is forced into the classrooms.

"In new buildings and additions, it is clear that the city prefers the method of direct radiation for heating and a system of ventilation to accompany direct radiation. The amount of radiation service appears to be sufficient but the method of control, however, is inadequate. Experience shows that the right kind of thermostat can be made to operate properly, and if the

ENTRANCE DETAIL OF THE ROXBORO JUNIOR HIGH SCHOOL, CLEVELAND HEIGHTS, OHIO.
J. H. Graham and Co., Architects, Cleveland, Ohio.

AUDITORIUM.



ROXBORO JUNIOR HIGH SCHOOL, CLEVELAND HEIGHTS, OHIO.
J. H. Graham and Co., Architects, Cleveland, Ohio.

city can afford it, this type of control ought to be employed wherever the direct radiation is the mode of heating. The next best plan is hand control of the valves by a device operating at the top of the radiator.

"A major deficiency in the direct system employed is the inadequate provision for moving the air with certainty and sufficiency. With the present 'direct-indirect' system, there is no method of forcing fresh air into the rooms. When the wind is in the wrong direction, the air currents are easily reversed. For preventing this, first-class buildings use what is called the 'unit system.' This employs electrically operated multiblade fans for driving the air through the radiators into the room. It is clear that every one of the buildings, including the newest additions, needs to be carefully studied by an expert ventilation engineer, by way of making the exhaust flues as efficient as practicable.

"Since the temperature in Terre Haute is mild much of the time, there will be much use of window ventilation. For such purposes, glass window deflectors, not less than twelve inches high, should be employed. The inadequate filter-box affairs should be discarded.

"2. Fuel and boiler rooms should in all cases be completely isolated from the rest of the building so that dust, soot, and smoke may find no means of penetrating the building. In the same way, the fuel rooms should be so completely separated from the boiler rooms by partitions and doors that the dust from the fuel is scattered as little as possible.

"3. Ash hoists should be installed at certain buildings where the removal is especially inconvenient.

"4. The installation of improved methods of ventilation for toilet rooms, shower rooms, etc., should be continued until they are common in all schools.

"5. The installation of new and improved artificial lighting systems should be continued until they are to be found in all schools. At present the lighting in many schools, employing older systems, is very bad. There ought to be at least six outlets, these arranged on two circuits, with two switches, so that, on days moderately dark, only half of the lights farthest from the windows will be turned on. For effective illumination, the globes should be at least double the candle power now employed. Where there are four fixtures, use at least 200-watt lights; where six fixtures, use 150-watt lights.

"6. In installing slate blackboards in classrooms, use the standards of blackboard area which have been estabished for rooms of different grades. The blackboards should be in height from the floor at the standard established for the different grades, and all platforms should be eliminated. At present there is a tendency to place too much blackboard in classrooms. A good rule is: Not one foot more than is absolutely needed.

"7. Sanitary drinking fountains should be made to work easily and effectively, or they should be removed and installed for a kind which does not easily get out of order. Drinking fountains should be distributed upon all floors of the building, so far as the corridor situations make this practicable. The number of drinking fountains should not fall below the standard of one for each 75 pupils.

"8. Wash basins should be installed until there is at least one wash bowl for each fifty children, distributed so far as practicable, to all the floors and supplied with both hot and cold water, towels, and liquid soap.

"9. On the basis of accepted standards, certain additional toilet facilities are needed in certain of those schools that have grown rapidly. Provide for as much seclusion as practicable, with provision in some cases for preventing congestion at the doors by providing separate entrances and exists, or by widening the doors.

"10. The plan of supplying separate lavatory and toilet arrangements for teachers and principals should be continued until all buildings are supplied.

"11. Improve the seating arrangement of the pupils. The use of either adjustable seats or of a variety of sizes in the several classrooms is desirable. One or the other of these plans should be employed for taking care of the great variety of sizes of pupils. It is well to install floors of battleship linoleum and movable furniture, especially in rooms housing younger pupils.

"12. Worn-out window shades should be changed automatically by the building custodians. It is possible to adopt a standard as will

(Concluded on Page 108)

The Department of Superintendence

The Dallas Convention

The city of Dallas will be the meeting place for the 57th convention of the oldest department of the National Education Association—the Department of Superintendence, which will meet February 26 to March 3, 1927, inclusive.

It has been said with reason that the winter conventions of the Department have overshadowed the summer meetings of the National Education Association and that these meetings have become the largest gatherings of educators in the nation, and for that matter in any country.

The convention headquarters will be located in the Fair Park Auditorium, where the Department of Superintendence sessions will be held. No hotel headquarters have been designated and the officials of the Association will be located in two or three main hotels of the city. Over 6,000 hotel reservations have been made, but it is expected that additional quarters will be available in private homes.

The usual railroad arrangements have been made for one and one half fares on the certificate plan. Tickets may be purchased beginning February 22, and will be good only via the same route in both directions for return up to March 10.

A number of features of the program of the Dallas meeting are given below. Some variations from previous years are worthy of note. An official opening of exhibits in Exhibition Hall is one feature. This will occur on Saturday afternoon, February 26, at 2 p. m. The exercises will be conducted by Superintendent Randall J. Condon, president of the Department and superintendent of schools of Cincinnati.

This official opening of the exhibits is arranged to emphasize that they are distinctly an educational feature of the meeting. There has never been an opportunity at any of the meetings equal to that offered at Dallas and the Department is making the most of the opportunity. In addition to the technical exhibits which occupy an area of 65,000 square feet and which have been arranged in connection with the registration and convention service in such a way as to present the maximum of artistic and educational effects, the distinctly educational exhibits which have been organized under the Department of Superintendence will occupy about 20,000 square feet of wall space. These will deal with progressive tendencies in education, a series of exhibits showing the latest and best thought in regard to schoolroom equipment, grouping of pupils, etc. There will be also a thousand square feet of exhibits showing the finest school buildings throughout the country.

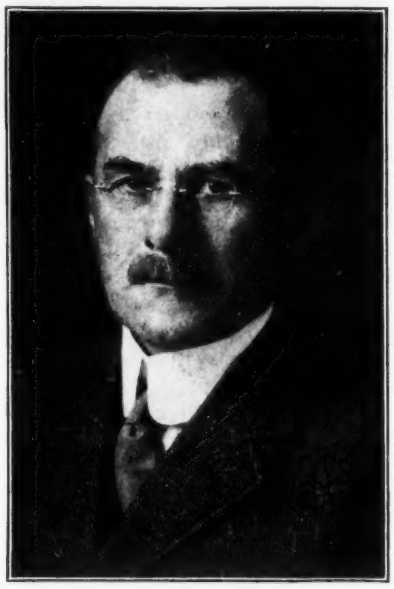
At the meetings themselves several outstanding men never before on the Department program will speak. These include Hon. Dan Moody, Governor of Texas, Hon. L. G. Hardman, Governor of Georgia, Rev. G. W. Truett of Dallas, Hon. John H. Clark, former Associate Justice of the U. S. Supreme Court, and Miguel Guerra Mondragon of Porto Rico.

"National Ideals" will be the general theme of the Monday morning session. The address of greeting will be given by Dan Moody, Governor of Texas, the response for the Association by Payson Smith of Massachusetts. L. G. Hardman, Governor of Georgia, will speak on "National Idealism." Herbert Wenig of the Hollywood High School will speak on "The Constitution." Mr. Wenig won the international championship in his address on the Constitution at Washington last June. Led by the National High School Orchestra and the organ the Monday morning session will close with the singing of "America the Beautiful."

"Some Phases of Education, New and Old," is the Monday afternoon theme. These are all to be group discussions. These sessions will be held in the auditorium and assembly rooms of the Methodist and Baptist churches which are just across the street from each other.

On Monday evening the session will be held at the Fair Park Auditorium, the general theme being "International Good Will and Understanding." There will be three speakers, Miguel Guerra Mondragon of Porto Rico will speak on "The Inter-American Significance of Porto Rico's Educational Program"; Mrs. Percy V. Pennybacker of Texas will speak on "The Password to the Door of Understanding"; and John H. Clark, former Associate Justice of the Supreme Court, will speak on "America's Contribution to International Understanding." The teachers' club of Dallas will provide the musical setting for the Monday evening program.

"Educational Ideals and Their Achievement" will be the general theme on Tuesday morning.



RANDALL J. CONDON,
President, Department of Superintendence.

There will be seven speakers each limited to ten minutes. W. F. Bond of Mississippi; Edwin D. Starbuck of Iowa; Thomas W. Gosling of Wisconsin; W. H. Holmes of New York; George Howard of North Carolina; L. A. Pechstein of Ohio; and Nicholas Bauer of Louisiana. Following these addresses there will be reports from the departmental Commissions and Committees. This will be followed by the usual business including the nomination of officers.

On Tuesday afternoon the Department will meet in sectional meetings at the Methodist and Baptist churches. The general theme will be "Problems of Administration and Their Solution." The session will consist of state departments of education, county superintendents, assistant superintendents, business managers, four groups of city superintendents divided according to the size of the cities, and teacher training institutions.

On Tuesday evening the meeting will be a joint session of the Department of Superintendence and the National Society for the Study of Education. A chorus of 600 students from the Booker T. Washington High School of Dallas will furnish the music.

The general theme for the Wednesday morning program will be "Our Educational Responsibility for the Lowest Quarter." The speakers will be Mrs. Helen Thompson Wooley of Teachers' College, New York, who will present the results of her ten years' study of one thousand pupils who went to work at the age of fourteen and of one thousand who remained in school; followed by William Green, president of the American Federation of Labor, who will discuss the problem from the point of view of the employee; William Hapgood of Indianapolis who will speak on "Education and Employment"; and Grace Abbott of the Children's Bureau who will discuss the problem from the point of view of social welfare. The closing address for Wednesday morning will be made by F. D. Boynton of Ithaca, New York.

Wednesday afternoon will be left free for visiting the schools of Dallas in accordance with a well developed program and for visiting the educational and commercial exhibits.

Wednesday evening will, as usual, be devoted to the college dinners.

For Thursday morning the speakers will be Emily Griffith of Denver who will speak on "An Understanding Citizenship Through Adult Education"; Thyrsa W. Amos, dean of women of the University of Pittsburgh, who will speak on the work of the high-school dean; D. J. Kelly, M. G. Clark, and Helen Field Fischer.

For Thursday afternoon the speakers will be James L. Hughes of Toronto, Henry Turner Bailey who will speak on "Personality as a Factor in Developing Efficient Citizens"; and Francis G. Blair, President of the National Education Association, who will speak on "The Face at the Window."

Thursday evening will be the climax of the entire meeting. This will be the recital by the full National High School Orchestra, made up of pupils from all parts of the United States in a great program of classical music, and the singing of eight hundred pupils of the elementary schools of Dallas in the cantata "Rip Van Winkle." There will be only one address on Thursday evening, that given by Superintendent Webster of Minneapolis on "Music."

ON TO DALLAS

In a peculiar way the superintendent of schools is without the usual opportunities to come in daily contact with other people holding like positions. There is only one superintendent of schools in a city. Have you noticed how often the superintendent wears a Rotary button? There is a reason. He has a classification all his own. Lawyers and physicians, coal merchants and grocers can chat at the luncheon table with others similarly engaged. There is but a single outstanding opportunity for the superintendent of schools to get the help and inspiration which comes from contacts with men and women having like duties and problems. That is at the time of the winter meeting of the Department of Superintendence. Selected leaders who have something important to contribute appear on the speaking programs. Fellow workers ready with a word of advice or inspiration are in the hotel lobbies.

The superintendent of schools has heavy responsibilities. It is no easy task to face the daily grind of matters demanding immediate action. Plans for new buildings, repairs for old buildings, teacher assignment, board meetings, committee conferences, telephone calls, correspondence, visitors of many sorts, are enough to task severely his time and strength. However urgent these things may be, the superintendent who stops after doing them has left undone the more important part of his duty. He still must find time to look ahead and plan for the future. To do this he must inform himself about the progress of education in the entire nation.

Schools are organized to serve human needs. In America these needs have expanded tremendously in recent years. The superintendent of schools who has allowed the pressure of immediate duties to choke out the vision of progress has ill served his community and its children. During convention week, while other cares are put aside, plans for the future have a chance to develop.

The Department of Superintendence will present at Dallas one of the most elaborate educational displays ever shown in the United States. The Fair Park Exhibit Hall contains 90,000 square feet of space: more than the combined areas allotted to exhibits in the Cleveland and Washington auditoriums. There will be exhibits showing progressive tendencies in art, schoolroom equipment, grouping of pupils and arrangement of school activities. Plans of some of the finest school buildings in the country will be shown in the architectural section. The best of everything used in schools—furniture, textbooks, maps, laboratory equipment—will be there in charge of carefully selected and well informed representatives.

The exhibits at the winter meetings are intended as a service to school executives. Many school board officers have spent with profit practically the entire convention period in the exhibit hall. Not infrequently the cost of the trip is saved many times over through information thus obtained.

For over fifty years the Department of Superintendence has occupied a place of leadership in American education. Over eighty per cent of the city school superintendents of the United States attended the Washington Convention last year. They will be at Dallas, February 26 to March 3. What they do and say will influence the work of every school, teacher, and child in America.—S. D. Shankland, Secretary.

Superintendents' Sectional Meeting

The superintendents of schools of cities with a population of from 10,000 to 100,000 will hold a meeting at Dallas, Texas, on March 1st, in connection with the forthcoming meeting of the Department of Superintendence.

The meeting will discuss problems of administration in these cities and will be in charge of Mr. James H. Harris, superintendent of schools at Pontiac, Mich. Supt. F. A. Jensen of Rockford, Ill., will talk on "The Selection of Textbooks"; Supt. W. C. McGinnis of Revere, Mass., will discuss "Problems of Educational Administration"; Supt. W. H. Bachrodt of San Jose, Calif., will take the subject, "Administration of Industrial and Vocational Work"; Supt. C. W. Washburne of Winnetka, Ill., will talk on "The Philosophy and Administration of a Program of Individual Instruction"; Miss Helen Parkhurst of the Children's University, New York, will discuss "The Theory and Practice of the Dalton Plan," and Dr. E. E. Lewis of Ohio University, will talk on "Administrative Appraisal of Programs of Individual Instruction."

(Concluded on Page 150)

THE AMERICAN
School Board Journal

WM. GEO. BRUCE
WM. C. BRUCE } EDITORS

EDITORIAL

SOME THOUGHTS ON TAXATION AND SCHOOL SUPPORT

If the demands of the schools throughout the country have been met in the main with reasonable adequacy, it is because the public willed it so and because the sources of taxation have been sufficient. The expansion which the American system of popular education has experienced, coupled with the increased cost of the several commodities of life, has swelled the school budget to a tremendous degree.

The readiness to support the schools upon a high basis of efficiency has, however, had its drawbacks. The funds have not in every instance permitted the realization of the educator's ambitions. Here and there skimping and paring down of school budgets had to be engaged in.

Leading educators soon realized that there are two ends to the problem. It is essential that public moneys be judiciously expended, but it is equally essential that a study of the sources of revenue be made. The two hang together. There cannot be an adequate school support unless there is sufficient wealth upon which an equitable tax is exacted.

It is gratifying to note that the American educator has turned his attention to the subject of taxation. For a time he engaged here and there in idle and impracticable suggestions, due to a superficial knowledge of the subject, but gradually has also in many instances demonstrated a remarkable mastery of the same. Thus, school men everywhere are beginning to realize that the general property tax which forms the basis for local and state revenue in this country is highly defective.

"The general property tax sins against the cardinal rules of uniformity, equality, and universality of taxation," said Dio Richardson, member of the Taxation Committee of the Washington Education Association, recently. "It presses hardest on those least able to pay. It imposes double taxation on one man and grants entire immunity to another. In short, our system as it is today is so flagrantly inequitable that its retention can be explained only through ignorance or inertia. It is the cause of so much injustice that every thinking man and woman in the state should set about to find relief."

Mr. Richardson unquestionably reflects the sentiment of educators everywhere who have given the subject any attention. What he said was well said. But, the mere condemnation of the general property tax will lead nowhere. Either the defects of the general property tax must be eliminated, new sources of revenue must be found, or a new system of taxation must be devised.

A system of taxation, no matter how faulty, which has been adhered to for a long time is not easily changed. Nor are desirable modifications of a minor character effected with any degree of expedition. The process of evolution in taxation, as applied to our own country, involves tedious stepping and can best begin by improving the general property tax system until further improvement is no longer possible. In other words, it is not until the property tax is operated at its best that its worst features become most apparent.

The educator who proposes the revision of the present tax system must be clear as to what course is most likely to prove feasible in his own state. The general property tax is subject to improvement, in fact, to much improvement. A state that is rich in natural resources, and blessed with industrial and commercial enterprises, may offer new sources of revenue. Public sentiment may be ripe for a radical innovation —say the income tax system—in the method of taxation.

It remains to be said that, among all the schemes and systems worked out by man throughout the ages for the raising of revenue in support of government, there is one tax principle which has stood the test of time and reason. That principle bases all tax tributes upon the ability to pay them. Our national government has recognized this principle; our state and local governments must eventually accept it because it is sound, equitable, and practical.

THE PSYCHOLOGY OF SCHOOL BOARD DELIBERATION

The discussions carried on by deliberative bodies, having matters of importance in hand, necessarily bring to the surface the attitudes and reactions of the individual mind. A group of a half dozen people usually expresses the several attitudes, namely, the positive, the negative, and the indifferent. There is the man who champions an idea with vigor, the man who opposes with equal force, and those who are easily swayed to one or the other side of a question.

In the pursuit of arguments and debates various methods of approach and retreat are revealed. There is the man who employs sledge hammer methods, and who cannot be convinced of the error of his position unless equally vigorous tactics are hammered at him. Then there is the man who loses himself in the heat of things, and who resorts to personalities rather than to hold to question in hand. Finally, we have the calm and deliberative mind that proposes only after having digested a subject, argues affirmatively, and demonstrates a good-natured readiness to abide by the judgment of the majority.

The last mentioned is usually the most effective in securing desired results. He wastes no time in useless oratory and comes directly to the point and, at the same time, is patient with his more irritated and loquacious opponent. He injects his comments and repartee where it will count most.

"I made it a point to forbear all direct contradiction to the sentiments of others, and all positive assertions of my own," said Benjamin Franklin. "I even forbid myself to the use of every word or expression in language that imported a fixed opinion, such as certainly or undoubtedly, and adopted instead of them, I conceive, I apprehend, or imagine a thing to be so and so, or it appears to me at present."

This experienced diplomat evidently recognized the futility of merely holding that he himself was right, and bluntly telling the other man that he was wrong. He held affirmatively to his own views rather than negatively attack the views of others.

Acrimonious debate is usually attended with more heat than light, either because complete information is not at the command of the contestants, or because impatience and irritableness controls them. Common agreement is promptly reached where the conclusions are quite obvious, or where common intelligence can only lead to one solution. Honest differences of opinion, however, are bound to arise. The human family is divided by nature into conservative and progressive classes. The mild mannered pacifist must deal with the aggressive and bold.

The group of men and women who sit about a board of education table to deliberate on school administrative affairs, manifest all the characteristics of the average group mind. They reveal the conservative and the progressive, the calm and the spirited, the peaceful and the combative, the reactionary and the radical.

No man can come to an intelligent conclusion on any question unless he has the complete facts before him. The light of truth therefore must enter the discussion, or, in other words, discussion must be in the direction of an effort to ascertain truth and fact. The peculiarities of mind, tendencies of thought, and viewpoints must finally yield to conclusions that appeal to reason and are acceptable and sound.

THE USE OF SCHOOL BUILDINGS BY PRIVATE ORGANIZATIONS

The question of how far boards of education may go in granting the use of public school buildings for private use, or public use outside of purely school functions, is raised constantly. While the average board of education is quite clear as to where the line of inclusion and exclusion must be drawn, it follows, nevertheless, that new and exceptional cases will arise. And it happens, too, that controversy is engendered in which the action of the school authorities is subjected to censure.

With the advent of the modern school auditorium—many of them spacious and splendidly equipped—it frequently occurs that no other hall in the community is quite so well adapted for certain functions of a private or public nature. They include lectures, dramatic performances and discussions of a civic, social, or purely educational character.

The boards of education usually exert a rule, or regulation, which may be written or unwritten, whereby all gatherings of a religious or political character are excluded. Such rules or regulations have worked well and have kept propagandists out of school buildings.

The trouble usually arises when some lecturer who promises a discussion on an educational, civic, or social topic, travels into highly controversial regions and thereby irritates a good fraction of the citizenship.

The extremist is found in every field of endeavor, and in recent years it has happened that even college professors have manifested tendencies towards radicalism. Some of them have waved the red flag with considerable vigor. The man who has a panacea for all the ills that afflict the relation of capital and labor is always rampant. Recently travelers to Russia who defend Bolshevism have tried to exploit their doctrines in schoolhouses.

The purely legal authority involved in the use of public school buildings by private organizations was recently determined by Commissioner Graves of New York state. The Public Education Association of the city of New York, says: "He confirms the generally recognized fact that under the law the board of education is fully responsible for the care and custody of all school property and has complete jurisdiction over determining the conditions under which permission may be granted to outside bodies to hold meetings or discussions of one sort or another. So far as the law on this point is concerned, he is very explicit. The board of education is in authority. The commissioner can intervene only when an aggrieved petitioner proves 'by a fair preponderance of the evidence'

that the board 'abuses its discretions or allows its decisions to be influenced by personal prejudice or animus.'"

This covers the purely legalistic aspect of jurisdiction. Director Howard W. Nudd of the association, however, suggests that the expediency of a liberal policy be promulgated.

Commissioner Graves believes that he has gone far enough when he says: "Any activity which is not embraced in the general school program, and which is of a controversial nature likely to produce ill feeling, jealousy or dissension, or to lead to misunderstanding, should be rigidly debarred."

And we agree with him. The agitator who is bent on disseminating harmful doctrines can always "hire a hall" elsewhere. The schools must be kept free from vicious propagandists who seek to cause unrest and undermine the social structure. If those who must determine who shall and who shall not speak in school halls fall into error, let such error be in the direction of a mistaken conservatism rather than a mistaken liberality. In brief, it is wiser to be on the safe than the unsafe side.

THE PUBLIC SCHOOLS AND THE CRY OF POLITICS

If there is one complaint which is heard oftener and in louder tones than any other in connection with the administration of the public schools, it is that they are being interfered with by the politician. The term "politics" is so freely and indiscriminately employed that one wonders sometimes just what is meant.

The common inference is that when we cry "politics" we mean that some one has cunningly and selfishly sought to disturb the accepted order of things and gained a personal advantage at the expense of the public welfare. If that is a reasonable interpretation, then it also follows that this kind of politics must be severely condemned.

But, there are politics and politics, the beneficent kind as well as the iniquitous. The creation of a board of education is a political act, the appointment of a school superintendent is a political transaction, the voting of bonds for a school building is a political procedure. All these come under the science of organization, and within the scope of government.

The trouble frequently arises out of the fact that the construction of the local governmental machinery is faulty. A system, for instance, whereby a school board is subservient to a city council, is bound to lead to political log rolling. Again, a school board that takes the selection of teachers and textbooks out of the hands of the superintendent, plays a dangerous game of politics and is bound to come to grief.

But, the injection of political maneuver as applied to a school system is sometimes due to a misguided public sentiment. The legal relations between a school board and a city council may be such as to render the former entirely free from the domination of the latter, and yet through tradition and confused notions permit the one to interfere with the other.

In some cities, for instance, the public has the fixed habit of looking to the mayor and the aldermen for the correction of every public shortcoming. When a citizen has a grievance against the school system, or some one connected therewith, he runs to the alderman for redress. In Chicago the ward alderman is the Caesar to whom all appeals are directed. While the mayor appoints the members of the board of education, the city council ratifies them. Consequently the alderman feels that he has a voice in school matters, and the public seems to share that opinion.

It happens that where a salaried public official owes his position to the vote of his constituency, he strives to serve that constituency individually as well as collectively. He is inclined to accept and extend favors, and may go to great lengths in satisfying the demands of his friends and supporters.

Thus, there are cities where a misguided public sentiment rather than the selfish politician interferes with the orderly operation of a school system. It is not unreasonable to assume that an alderman would prefer to be relieved from the burden of settling school squabbles or finding jobs in the schools for taxpayers' daughters, or plugging for the promotion of this or that person connected with the school system.

It is not only necessary that the board of education be independent of the city council, but also that the public mind secure a correct attitude as to the true scope and function of the two bodies. If politics and political maneuvering is to be eliminated from the government of the schools, then the public, too, must refrain from using undesirable practices.

CONTROLLING FACTORS IN FIXING TEACHERS' SALARIES

The shift in the economic status caused by the world war has raised commodity prices and lessened the purchasing power of the dollar. It has also increased the cost of education, and since compensation for services is the largest budget item, administrators and instructors have turned their attention to the salary schedules. The common agreement reached here is that if a high order of service is to be exacted, the price must be paid.

The approach to the subject of compensation has usually proceeded upon a sound basis. Administrators in fixing salaries have taken into account the cost of living, and have at the same time sought to place a value upon the service rendered. While in the main satisfactory adjustments have been found, it is by no means argued that every salary schedule is perfect. Nor is it claimed that such schedules are not subject to changes as time goes on.

The building of salary schedules has in recent years proceeded upon more scientific lines than ever before. Considerations never dreamed of in former years, and all seeking to do absolute justice to those who market their services, have come into play. Equity, justice, and fairness have been the underlying motive.

While the exceptional in the way of parsimony on the one hand and unreasonable demands on the other has occasionally come to the surface, the altruistic has also been noted. Every school system, large and small, has had its superannuated teacher, or teacher that scarcely measured up to the requirements of her task. Favoritism in many instances closed an eye to shortcomings.

But, altruism has asserted itself in the field of school administration in quite another form recently. It not only contemplates a generous compensation for the schoolroom worker, but takes into consideration the economic dependents with which such worker is burdened.

The question has been seriously considered in several cities in New York state. In one city it is proposed to add something like $300 per year to the teacher's salary for one dependent, $150 for each additional dependent until a maximum of $900 is reached.

The objections to such an innovation and interpretation of a salary schedule must be obvious. Teachers are employed for the services they may render and for which they have a right to expect a proper compensation. But, to measure the salary of the teacher by the number of relatives she supports at home, is illogical and untenable. The self-respecting teacher will object to the introduction of charity into any salary schedule. The profession, as a whole, will also resent a salary schedule that is constructed upon any other basis than that which compensates character and ability, and which recognizes the true value of the service rendered.

The future, no doubt, will continue towards refinements in the formulation of salary schedules, and discover ways of measuring and compensating merit more equitably than is now being done, but it will eliminate, as it must, the suggestion of charity or favoritism. The teacher sells service, the school board buys it. Hence, the payroll is a business matter. This is the interpretation which the public puts upon salary schedules. It is the interpretation that the teaching profession upholds.

CLARENCE D. KINGSLEY

The death of Clarence D. Kingsley on December 31 removes from the field of American education a man who rendered a valuable service modestly, without ostentation, and without holding high office. Although he never became the executive head of any great school system, nor held a professorship in a great college, still he influenced education as have few great school executives in the past 25 years.

It was Mr. Kingsley's keen understanding of education that developed the seven cardinal principles of secondary education which are the key to the aims and organization of the present high school system. No less important was his service in the field of school architecture in which he labored unceasingly for years to bring about a better adaptation of schoolhouse plans to meet educational aims and methods, and to introduce economy.

Mr. Kingsley will be sorely missed.

OMAHA ELECTS BUSINESS MANAGER

Mr. Osgood T. Eastman has been elected as business manager of the board of education at Omaha, Neb. Mr. Eastman is a well-known business man of Omaha, a former banker, and a leader in civic movements. The appointment is for two years and the position carries a salary of $7,000 per year.

Mr. Eastman is 61 years old, a graduate of Amherst College, in the class of 1886, and has had wide experience in business and finance. He went to Omaha immediately after graduation to enter the employ of the Union Pacific Railroad. In 1890 he went to Chicago, where he established himself in the wholesale drug business. He returned to Omaha in 1908 and entered the employ of the First National Bank. Here he remained nine years, but in 1920 he resigned to enter the Merchants National Bank.

The election of Mr. Eastman was unanimous as all twelve members of the board were united on the election of a business manager. The election ends a struggle of more than a year, for bringing the business affairs of the Omaha schools under the control of an experienced business man. The fight was accompanied by much bitterness, constant newspaper comment, and considerable local feeling.

—On recommendation of Supt. Herbert S. Weet the Rochester, N. Y., board of education has revised its salary schedule for elementary teachers who have served twenty years or more or who have done advanced professional work. An additional salary of $100 will be allowed any elementary school teacher who has twenty years' satisfactory experience in the Rochester public schools. An additional salary of $50 will be allowed elementary school teachers for each five year period beyond twenty years, except that no allowance is to be made for more than thirty years of service. For each year of training beyond the two-year normal school an allowance of $100 will be made to the salary otherwise available for all elementary school teaching positions, provided the quality of service is satisfactory.

The Master Teacher and His Salary

D. H. Pierce and A. W. Schmidt, New York, N. Y.

"All alike tend to mediocrity," says Dean Russell of Columbia University, referring to the situation which confronts "every educational institution from the kindergarten to the university"—"Dismissal of incompetents" guarantees no improvement—"the best" seek promotion and as a result we are suffering from "professional malnutrition."

To remedy the situation he suggests a plan of promotion comparable to that of the internship in medicine. He proposes the development of the master teacher in the upper levels of experience. To begin with there is to be an apprenticeship of a number of years. The beginning teacher, fresh from the training school, under the close guidance of the "master," gradually acquires those skills which in turn make the apprentice the master.

But this plan, unsupported, will not give the results sought. There are economic considerations that choke it at the sources. The ambition of any master includes not only his pride in his work, but such reward for it as permits him to remain in it and grow.

Salary a Deterrent

Though there are other considerations, the chief appeal in America is definitely the money return. To secure and hold comparable personnels a profession must enter into competition with other professions and education goes into the general market and gets what it is willing to pay for, and little more.

Education is certainly as valuable to the social organization as engineering, and the personnel of education should be made up of men and women as capable and as well trained for their jobs as are the physicians and engineers. Genuine talent for long and superior productivity in education should be sought. There should be a place for big men and women in this field. Education is important enough to utilize the best service available.

Take a university student at some time in his college training when he is shaping his plans, permit him the essential qualities, intellectual and otherwise, for success in the field he chooses, attribute to him the ambition to master what he undertakes and to render a service which will lead to professional and social recognition.

On this basis he looks over the field and finds professions which hold out these inducements; medicine, engineering, the law, architecture, dentistry, manufacturing, real estate—education.

He analyzes the situation further and finds that his desire to achieve his ambition, and thereby gain esteem and recognition has been especially limited in the field of education.

In education he could gain admission quickly and do rather well financially his first two or three years, but after that there would be little further to attract him. It would be impossible for him to maintain a standard of living similar to that his classmates would reach in other professions after, say, a decade. Beyond that, the comparison would be even more unfavorable. In this standard of living, for example, he would be limited in the upbringing of children as to their number and care, limited also in the kind of home and its appointments that he could with reason expect to maintain. Contacts with men of mental and social experience similar to his own would be denied him because of his inability to maintain the social machinery of clubs, travel, or recreation.

It is doubtful whether more than a few students consciously analyze their future as does this student. Because of the prevalence of the "fly-by-night," "hire-and-fire," "teach-and-marry," "a-step-to-business" types in education, there is evidence that there are many who make no such analysis.

But, analyzed or not, all the evidence seems to support the contention that economic principles, with few exceptions, operate to prevent the election of education at the outset, cause a large turnover in the early years of experience, and finally bring to those remaining an ultimate feeling of dissatisfaction and regret.

Teachers fall into several groups. Some have elected to be teachers in spite of analyzed conditions. Some have drifted in and cannot easily get out, though they desire to do so. Others are satisfied. These last are chiefly the mediocre who probably could not improve themselves in other fields.

To secure superior men and women professionally trained and capable, education should offer permanent financial returns similar to those of other professions. In the cadet-master plan for education there should be the element of pride of achievement and the recognition of honest service, but not divorced from the initial factor of a salary schedule that can afford to go into the open market for its material.

Principles of the Salary Schedule

Inducements should not be extended to those who mean to be only temporary. Mediocre individuals ought to stand or fall in competition on the earned place in the salary schedule, but the probationary period ought to eliminate almost all of the mediocre. In cases of obvious unfitness in the work the salary rating should decline.

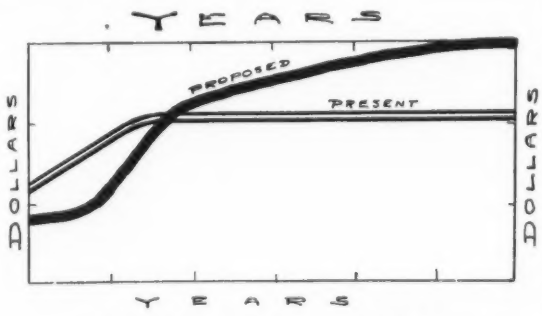
Salary promotions should be possible without transfer in position. Architects, physicians, and surgeons, receive larger incomes for better service but they remain in the same field. Certain technical corporations promote their promising engineers to higher salary levels but retain them in the same kind of work. They are promoted but not to executive or managerial assignment as is so often the practice in education.

Irrespective of anything else the initial salary must be a living income. (The plan of displacing higher salaried teachers by younger ones at half the figure is deplorable.) This living income should be determined independently of what the "home girl" can live on.

The amount paid over and above the initial minimum should be rated on the basis of training in excess of the acceptable minimum of state and local requirements.

Foreign experience should also be recognized in the initial salary rating if comparable in kind.

A teacher once appointed should receive fixed automatic increases which are relatively small during the probationary period and which accelerate for five to ten years when a provisional maximum may be reached.



HOW THE PROPOSAL WORKS

A teacher, under the proposed plan, begins with a lower initial salary than at present, remains on a relatively low plane for a few years, after which the salary increases are larger until the "provisional maximum" is reached.

This step is acquired in six to eight to ten years. Then instead of continuing on a plateau, as at present, the rise is for the individual of established merit.

CLARENCE D. KINGSLEY.
Died, December 31, 1926, at Cincinnati.

But there should be special provision for rewarding superior service. Additions above the provisional maximum should be determined by such measures of proficiency as: Writing for publication in the professional field, significant travel, advised experimentation, formal professional training in service, special service in local educational organizations, social-civic interests, exceptionally good craftsmanship.

There should be no predetermined and fixed maximum by subject, grade, or school.

DEATH OF MR. KINGSLEY

Mr. Clarence D. Kingsley, educational consultant on school buildings for the board of education, Cincinnati, Ohio, died suddenly in that city on December 31st.

Mr. Kingsley was born in Syracuse, New York, in 1874, and received his education at Colgate University and at Columbia University. Upon graduation from the University, Mr. Kingsley became an instructor in mathematics at Colgate. Later he resigned to become an instructor in the Manual Training High School at Brooklyn, New York. In 1912 he was appointed state high school inspector for Massachusetts, which position he held for eleven years. During this long period of service, he did much to improve the character of secondary education in the state. He gave considerable time to the planning of school buildings as a side issue in his work as supervisor of secondary education. The assistance thus given to numerous towns and cities of the state effected important economies in the planning of buildings.

In 1923, Mr. Kingsley resigned his position in Massachusetts to give his entire attention to the planning of school buildings and to consulting service to school authorities in need of assistance in erecting school buildings. As educational consultant, he conducted scientific studies on school planning and gave expert advice to school boards and school architects.

For several years Mr. Kingsley had an office in Chicago and was connected as a consultant and advisor with the Chicago board of education. His services were also given to architects and school boards in smaller communities in the organization of efficient programs in school building, economical room layouts, and criticism of plans. During the past year he has been located at Cincinnati and Toledo, where he was employed as educational consultant and school building engineer for the school boards of those cities.

During the past two years he also acted as instructor in classes on schoolhouse planning in the department of school administration of the University of Michigan. He was a member of the Committee on Standardization of Schoolhouse Planning and Construction of the N. E. A., and rendered important service in completing its report.

Mr. Kingsley's greatest educational work perhaps was the editing of reports of the Commission on the Reorganization of Secondary Education. The original outline of the cardinal points which formed the heart of the report, and in fact, most of the body of the report, were written by him. It was his energy that caused the report to be completed in a very short time and to be promptly reviewed and accepted.

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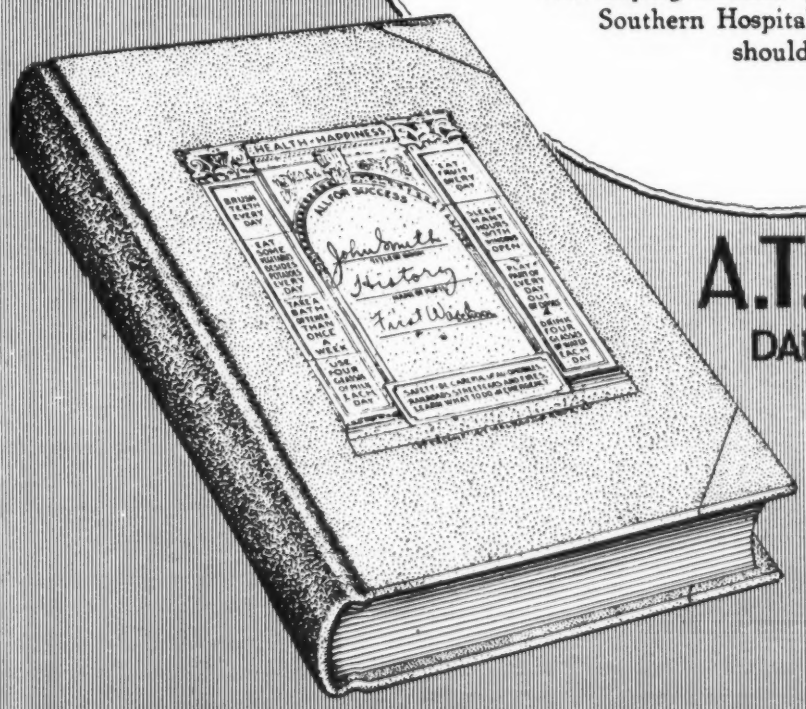

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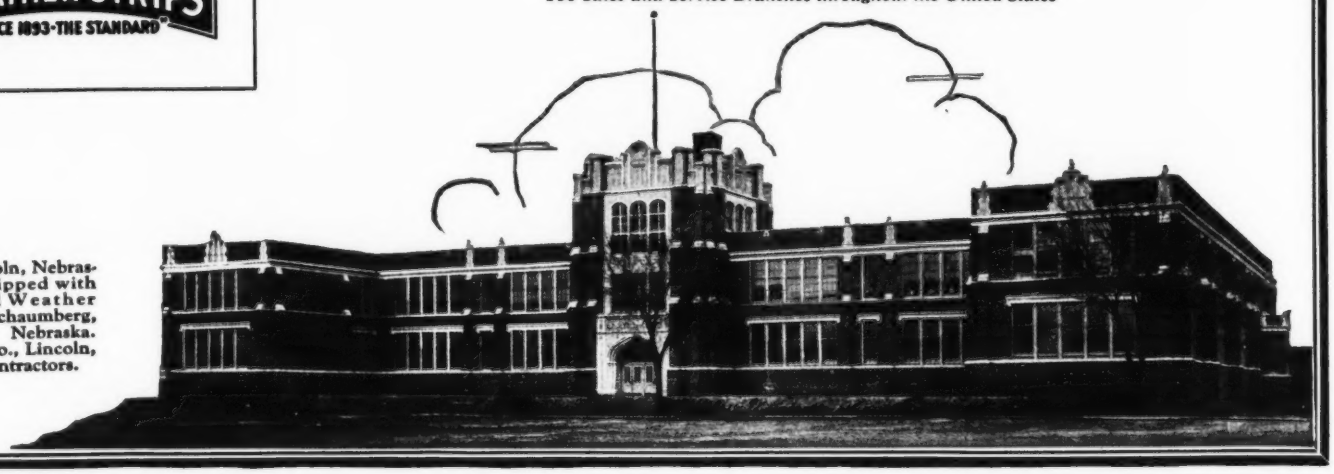

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An Accounting System for High School Activity Funds

Raymond W. Coleman, Duvall, Wash.

The problem of financing and administrating high-school activities is greatly facilitated by an efficient accounting system. Both teachers and students derive direct benefits from a good system of bookkeeping. For the teacher there is relief from much clerical work connected with keeping records. The student enjoys the possibility of cooperating effectively in the management of activities. The school and the activities themselves are free from the danger of losing funds. If the duties of everyone concerned are clearly defined, there will be less friction and less work.

The Test of an Accounting System

Having established the necessity for a system, it might be well to determine the type desired. The ultimate test of any accounting system is whether or not it meets the needs of a particular task for which it is designed. In order to accomplish the desired results it must be comprehensive. It must be elaborate enough to include all necessary records. In addition, it should be so organized as to take care of any new situation which may arise and adopt it into the system without any troublesome changes. It must, however, be of a comparitively simple structure or it will not be efficient, for ordinarily neither teachers or students are trained in business practice. If the system takes up too much time it will be unsuccessful, for the teachers have not the time and the students have not the inclination to be bothered with it.

The actual operation of the system can be explained better in a few preliminary remarks relative to the people who operate it.

The System Manager

Responsibility for the management of the system should always be in the hands of one person. Whether the principal, commercial teacher, or other teacher has charge of it depends upon their respective abilities. Ordinarily the commercial teacher would be best qualified as manager. This man would have the following books under his control:

1. Cashbook.
2. Journal.
3. Ledger.

The manager of the system should explain to the activities managers their duties and how they connect with the system in general.

Activity Manager

The student or teacher in charge of the records of his particular activity needs only one book to show the status of his finances and the reason why they are in that condition. In addition to his own book, he should have an order requisition pad and an entry memo. pad.

Cashbook

The cashbook is a record of all funds received and disbursed by the system manager. The receipts side of the cashbook appears on the left page and the disbursements side on the right page. (For example the first receipts page would be page 2 and the first disbursement page would be page 3). Reading from left to right on the receipts side, the captions of the columns would be as follows: date, explanation, ledger folio, amount, and balance. The rulings and captions for the disbursements side of the cashbook are the same. The headings of the various columns are self explanatory with the possible exception of the ledger folio. In this column is placed the number of the page in the ledger to which the entry is carried. Two simple rules are necessary to keep in mind when recording entries into the cashbook:

1. All money which comes to the system manager is recorded on the receipts side of the cashbook.

2. All money which the system manager pays out is recorded on the disbursements side of the cashbook.

The difference between the receipts and the disbursements represents the cash or bank balance of the system manager.

Journal

All memoranda items or any entries other than cash entries (transfer of funds) are recorded in the journal. A separate column for the date, explanation, ledger folio, debit, and credit, is a common journal form and will adequately serve the purpose. Assume that the Dramatic Association has loaned the Debating Club $25.00 to start the season's activities. In the journal the Dramatic Association account would be debited (showing a decrease of funds in their account) and the Debating Club account would be credited (showing an increase of funds in their account).

Ledger Accounts

The purpose of an account in the ledger for each activity is to give in a condensed, summarized form the current financial history of each society. Each activity of any importance has an account of its own. The activities of minor importance are placed under the heading of an account called "General Activities." It operates in the same manner as do the individual accounts. The ledger account is divided into two sections, debit and credit. Each section has columns for the following: Date, explanation, ledger folio, and amount. Two rules should be kept in mind when operating ledger accounts.

1. All fund increases are placed to the credit (right-hand side) of the account.

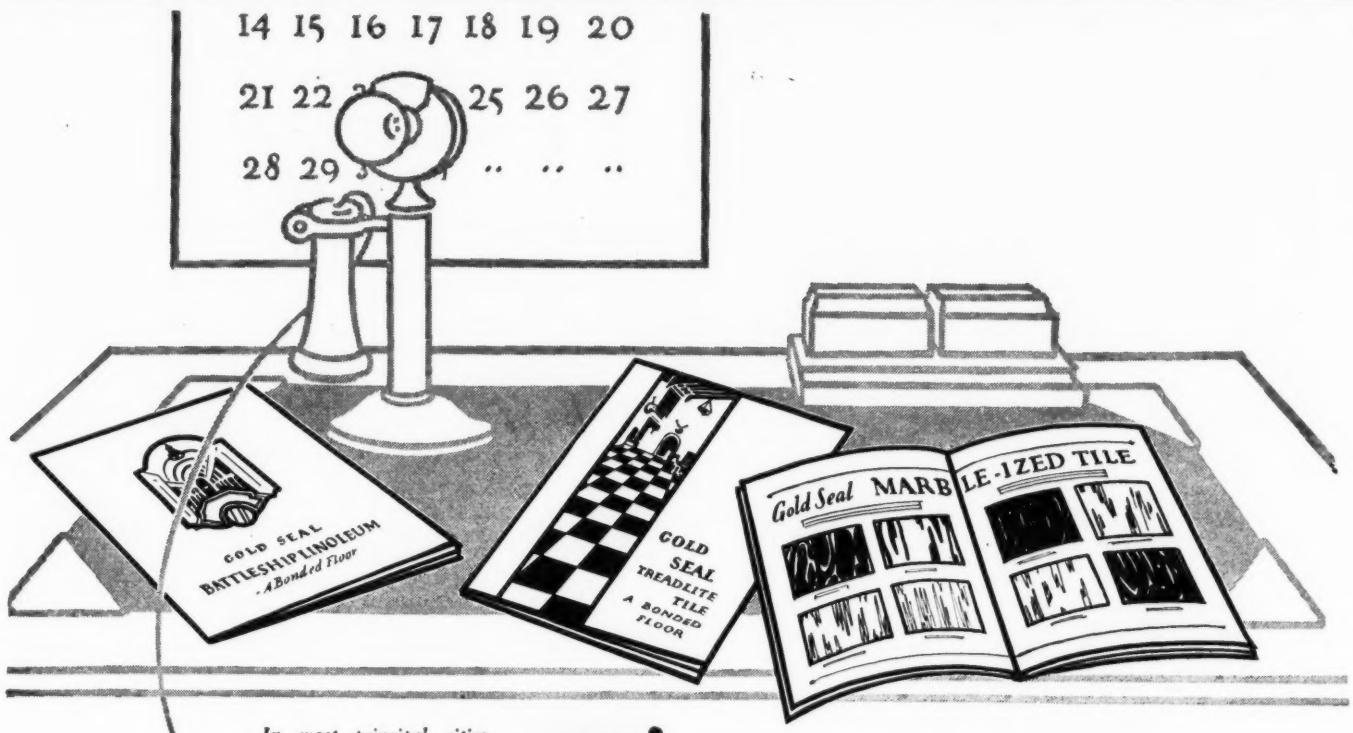
2. All fund decreases are placed to the debit (left-hand side) of the account.

The sources for entries into the ledger come from the cashbook and the journal. The process of posting (transferring entries from books of original entry to the ledger) is simple if the following cautions are observed:

1. All items from the receipt side of the cashbook are posted to the credit of the account which made the deposit.

2. All items from the disbursements side of the cashbook are posted to the debit of the activity account from which the funds were expended.

(Concluded on Page 143)



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NEWS OF THE SCHOOL BOARDS

—The Montana School Board Association met at Helena on January 14th. The meeting dealt largely with school problems seeking solution at the hands of the legislature.

—A meeting of all the clerks of township school boards in the county was held recently at Portsmouth, Ohio, under the direction of Supt. E. O. McCowen.

—A new member of the New Orleans, La., parish school board appointed by the governor is Harry Goodman. The appointment is most acceptable to the constituency.

—John D. Hyde was elected a member of the board of education of Anderson, Indiana, by the city council of the city. Mr. Hyde is the superintendent of a large manufacturing plant.

—T. A. Mellon was elected president of the board of school directors at Easton, Pa. Allen Carpenter was elected vice-president.

—The St. Louis, Mo., board of education holds to rule to keep silent on the proceedings of its committees until they reach the board for action. The newspapers are displeased. The St. Louis "Dispatch" says: "It must be admitted that some of the subjects that come before the committee are of such nature that mischief would result from making them public, such as the selection of school sites and the discussion of personalities. But there are many other things of much interest to the public which are never heard of until they are presented at a meeting of the general board. Then they are acted upon perfunctorily or without such debate as would throw light upon them."

—The board of education of Allegany County, Maryland, prefaces its annual report with a pledge to the American flag. The cost per pupil is placed at $59.58. The board consists of President F. G. Pugh, William L. Sperry, Cumberland, and J. Marshall Price, Frostburg. Edward F. Webb is the superintendent.

—The schoolboard convention of Racine County, Wis., was under the direction of George Dicks of the state department. The question of how long a teacher should be allowed to stay in a district was answered by Mr. Dicks, who said: "If she is a first-class teacher, she should be allowed to stay as long as she pleases. A teacher that gets good results is the cheapest in the end, and her services cannot be measured in dollars and cents." He said that for a teacher who is a failure in her work, three days is too long for her to be kept. Mr. Dicks believes in the equalization of education, and says that all schools should have a nine months' term, so that one child will be as far advanced as another when they start high school work.

—In accordance with the Ohio code which provides that the district school board members shall hold annual meetings, a county convention was called at Paulding, Ohio. Sixteen school districts were represented. The discussions dealt with the subject of taxation, compulsory school attendance, and rural school administration.

—The members of the Monroe, Mich., board of education, headed by President A. W. Stitt and by Supt. C. W. Crandall, visited Dearborn, Lansing, Grand Rapids, Muskegon, and Flint, Mich. The purpose of the visit was to secure ideas for a new school building.

—State Supt. F. G. Blair of Illinois has ruled that authority to punish a pupil is vested in the teacher only in case the school board has adopted rules to that effect. Mr. Blair points out that the state superintendent and county superintendents have their powers defined by law. City superintendents, principals, and teachers derive their powers from the boards which employ them. It is in the interest of good administration that superintendents, principals, and teachers be allowed to use large discretion and initiative in matters of government and discipline.

—The school board of Elgin, Ill., has voted in favor of a revision of the rules, giving the board more organized control over the school expenditures and the letting of contracts.

Under the new rule, prepared by Mr. A. L. Metzel, chairman of the committee, contracts for $200 or more may not be let without first advertising for bids. No committee expenditures of any kind may be made without securing the approval of the board as a whole. The rule seeks to eliminate the practice of board committees in awarding contracts without the board's approval, and it also makes the board responsible as a whole for any and all expenditures for supplies, repairs, etc.

—Mr. Jacob Chadeayne, a member of the school board of Ossining, N. Y., died suddenly following an attack of apoplexy.

—The school board of Benton Harbor, Mich., has devised a new plan for reducing the hazard to school children from street traffic without the employment of special officers. A new schedule of class hours has been arranged for the kindergartens and first six grades so that children of these grades will be out of school and on their way home before the severe traffic rush begins.

—Evansville, Ind. The janitors and engineers of the school system have been placed on a merit basis. At the suggestion of the board of education, Mr. M. S. Spears, business manager, was asked to make a study of methods for improving the janitorial service. The suggestions of Mr. Spears were approved and adopted for immediate use. The new plan calls for the appointment, promotion and retention of all employees in the department.

—City Solicitor P. F. Shanahan of Lynn, Mass., has recently ruled that the school board is liable where persons are injured while in, or leaving, a building rented for public purposes. The city is exempt from liability only when a hall or building is used for purely municipal purposes.

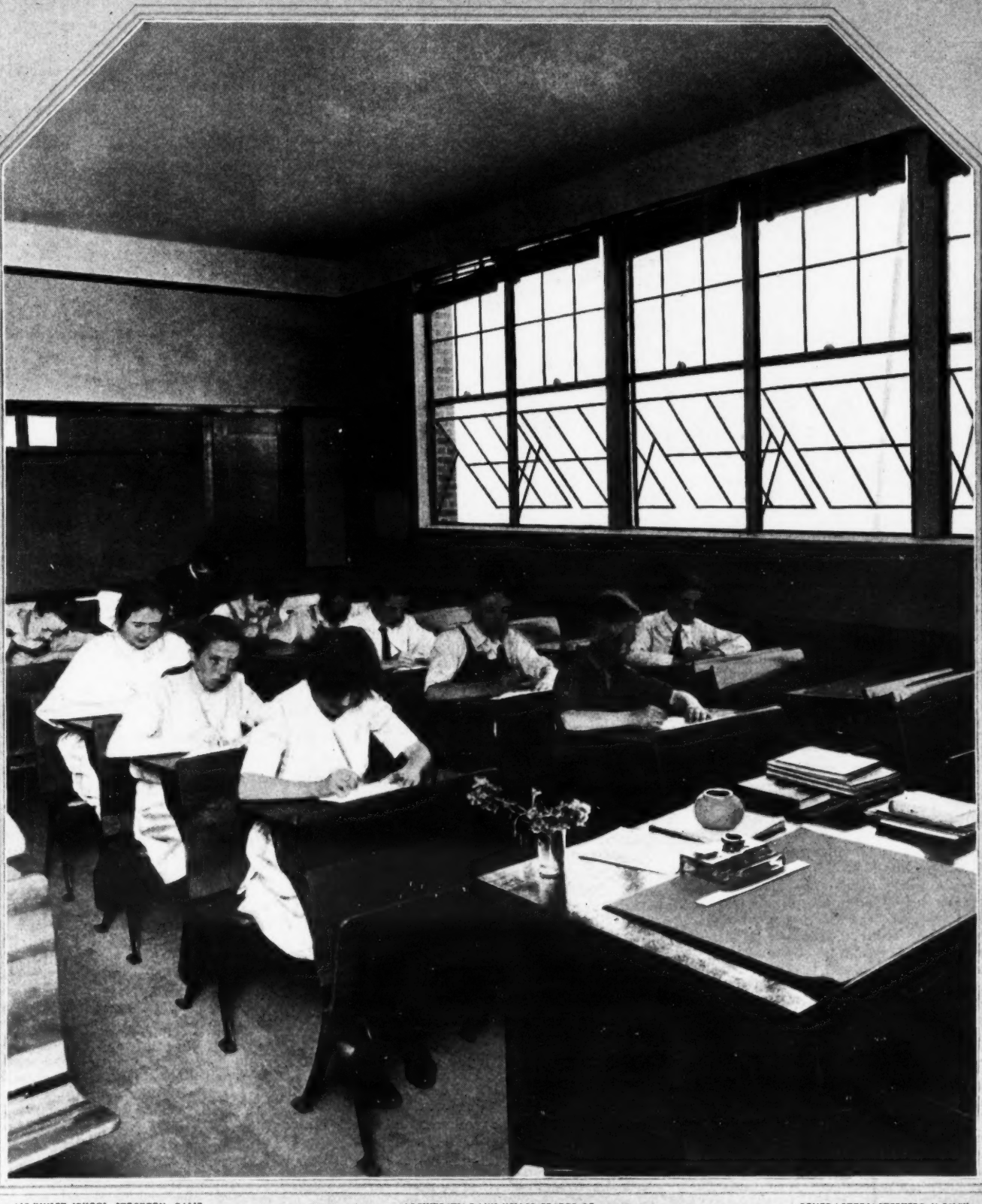
—The Chicago board of education has filed a petition for a writ of mandamus to compel the Cook County board of review to revise its assessments and hear complaints. It is charged that eight thousand pieces of property in Cook County have been underassessed $1,600,425.

It is further asked that reasonable and proper rules for guidance of persons doing business through the board of review be adopted.

—Bedford, Va. A suit has been brought against several citizens near Huddleston to compel the payment of several subscriptions totaling $6,800, which it is claimed, was made toward the erection of a new high school.

—Cleveland, Ohio. The school board is seeking a solution of the problem of corporal punish-

(Continued on Page 74)



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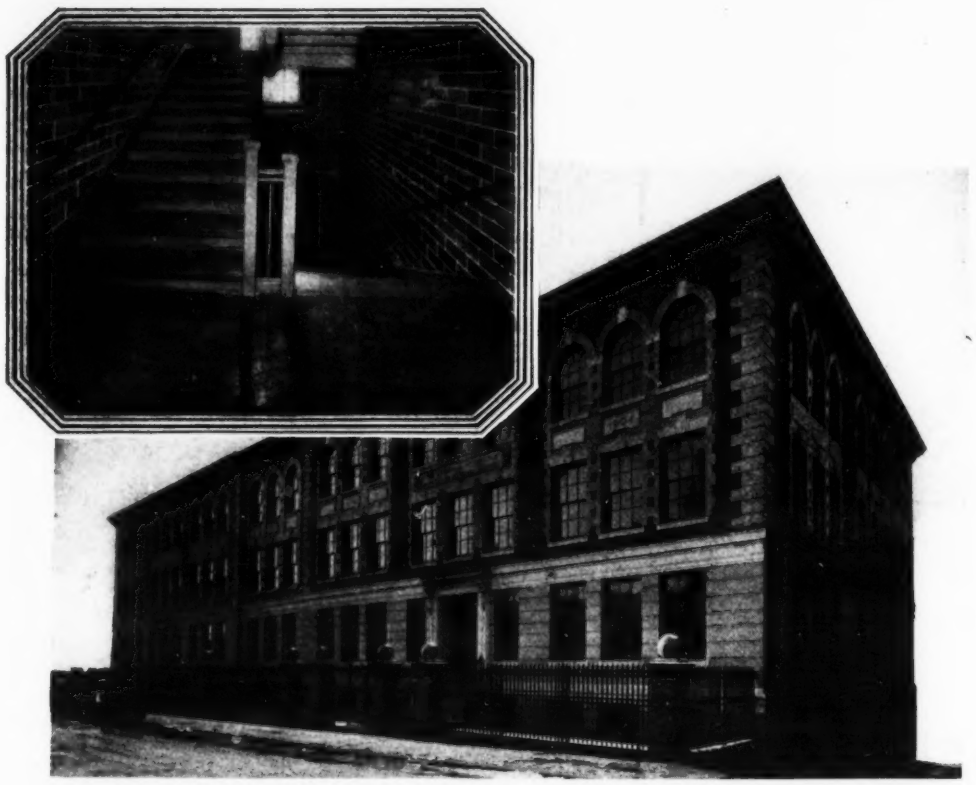

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(Continued from Page 72)

ment. A resolution presented by Mrs. Virginia Green, sought the elimination of corporal punishment. The question came up as a result of complaints made against three instructors who were charged with flogging a 13-year-old boy.

—Bismarck, N. D. Mrs. Burdella Helgeson has asked damages of $15,000 against Mr. August Westerman, a school board member, because of injuries to her ankle, sustained in an effort to hold her job. Mrs. Helgeson claimed she was discharged by the board, but refused to accept its decision and returned to work. She claimed she was pushed from the schoolhouse steps by Mr. Westerman.

—The board of education of Cleveland, Ohio, has approved the establishment of a pension fund in the state for public school custodians. The board refrains from committing itself on a bill to be presented at the next legislative session.

—New Haven, Conn. The old New Haven city school district which had functioned since 1852 is now out of existence. It appears that in 1923 and 1924, taxes were collected separately for the school district and for the city of New Haven. In 1925, under two legislative acts, the existence of the school district was terminated, and a provision was made for the release and transfer of all funds and property by the board of education. This release was signed and recorded in December, 1926.

The execution of the New Haven city school district as a separate corporation was effected by the legislature in 1925 upon the petition of certain citizens who realized the danger of the board attempting to operate as a separate municipal government.

—The purchase of uniforms, shoes, and similar athletic equipment for football, baseball, or other athletic teams has been declared illegal in Massachusetts by City Auditor Charles H. Thurston of Cambridge. Mr. Thurston recently refused to approve bills for the outfitting of high-school teams in Cambridge.

It appears bills for athletic equipment were incurred by the Cambridge school committee and upon Mr. Thurston's refusal to approve them, an opinion was sought from the state commissioner of education. He replied that, in his opinion, the school committee was within its rights in furnishing such equipment. Despite the opinion, Mr. Thurston has refused to give his O. K., and the board has no way of forcing the matter.

—A petition has been filed in the Common Pleas court of Ohio in which suit has been brought against the boards of education of Richland county and Washington township for $285, the amount that should be paid for the transportation of a student, William Griffith. The boy had completed the grade work in the township school and later attended the Mansfield high school for 285 days. The father claims the boards of education failed to furnish transportation or to pay board for the pupil.

—Belleville, Ill. In an effort to control traffic conditions about the schools, the local board of education authorized the appointment of school janitors as traffic officers. Later it was found that the janitors, to become regular officers, would be required to give bond for $500. The matter is held in abeyance until the board determines whether it is advisable to expend the money for the bonds.

—Attorney General H. H. Cluff of Utah, has ruled that there is nothing in the state laws authorizing the person or taxing unit making a deposit of public funds to pay the premiums on the bond required to be furnished by the depository. It appears that the Carbon County school district has paid such a premium on the bonds of the depositories. The Attorney General now holds that the bills allowed and paid by the county school district covering the premiums on depository bonds have been illegally paid and that such sums must be refunded to the district.

—New Washington, Ohio. The school board has refused to permit the use of the school gymnasium for athletics either scholastic or independent. In the opinion of the board. basketball keeps the students from their books and away from their homes.

—The board of education of Oklahoma City, Okla., in its efforts against secret societies, has issued notices to teachers, students and parents to the effect that secret societies in the schools are illegal. A rule was passed which requires that principals be held responsible for teachers reporting evidence of the existence of secret societies.

—St. Louis, Mo. Following a three-hour discussion, the school board has decided in favor of secret sessions for meetings of the board. Under the present rules, the meetings are executive and neither officials nor members are permitted to divulge what takes place. Recently, Mr. M. A. Rollins, a member, had attempted to have the sessions thrown open to the public.

—The school board of Cambridge, Mass., learned that the local public school association had held a secret meeting, attended by several teachers, at which the school board was severely criticized for its position on the salary question. The members of the school board held that it was not within the province of the association to determine questions affecting the relations of teachers and the board.

—A. J. Hall of South Abington township was elected president of the School Directors' Association of Lackawanna County, Pa. Other officers named were: First vice-president, Mrs. Charles Tracy, Dalton; second vice-president, George H. Bennett, Jermyn; secretary, Mrs. Kate Williams; treasurer, Ralph Wood of Clark's Summit; auditor, Dr. A. P. Gardner, of Roaring Brook.

(Continued on Page 77)

SUPERINTENDENTS AND SCHOOL BOARDS

There are many superintendents of schools who desire legal power because they wish to cover up their own inability to impress themselves and a proper educational program upon their boards of education. As a general rule the superintendent of schools who has a real educational program which he knows how to put over can secure all the power he ought to have, whether or not that power is stated in law. For example, thousands of superintendents now have the responsibility by virtue of a rule of the local board of education of nominating teachers and all other employees. When superintendents have demonstrated that this is a desirable administrative practice there will be no difficulty in making it a part of the school law.—Roscoe L. West, Assistant Commissioner of Education, New Jersey.

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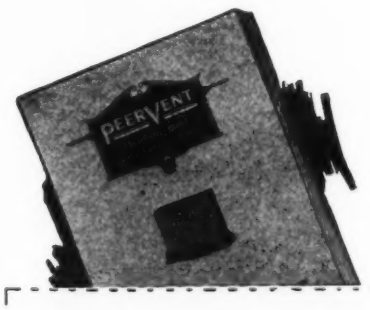

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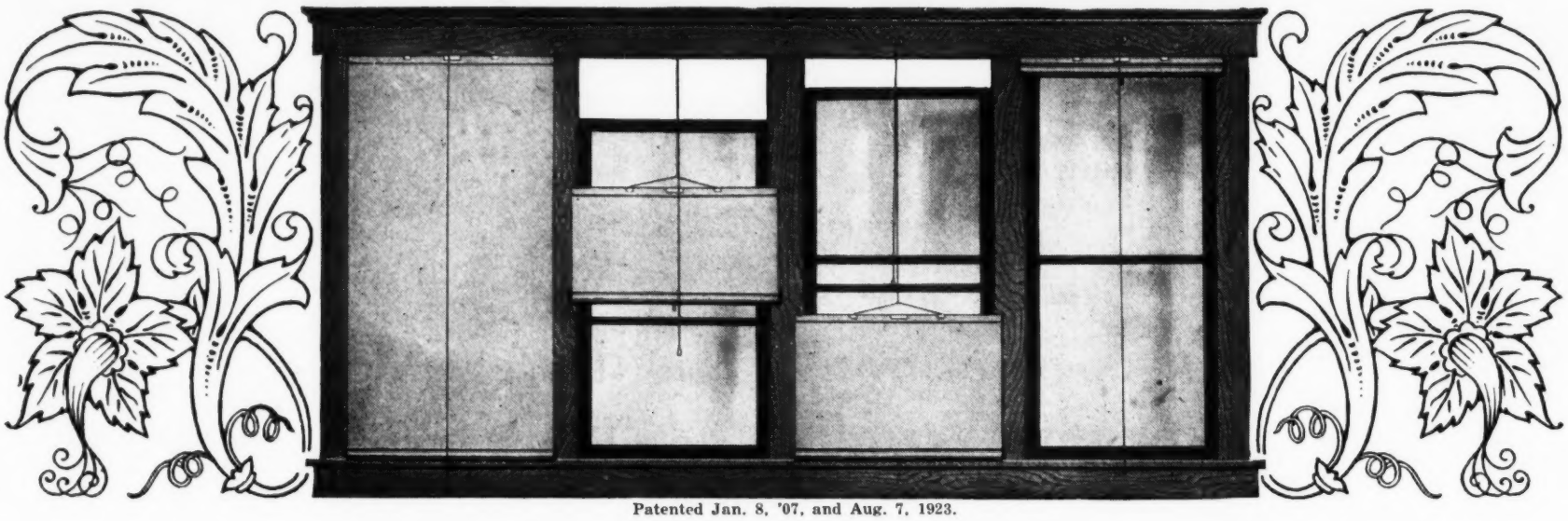

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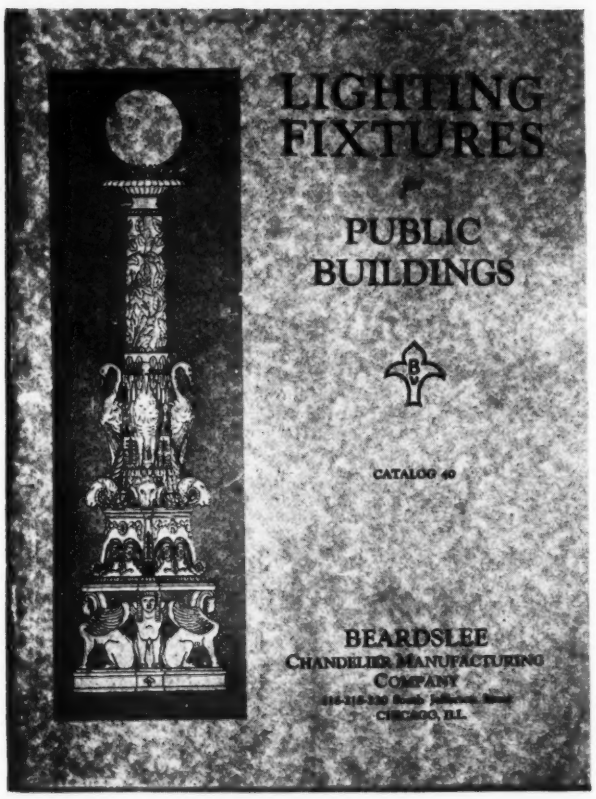

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A copy of "Lighting Fixtures for Public Buildings" will be gladly mailed you on request.

Beardslee Chandelier Mfg. Co. Chicago 219 South Jefferson St.

(Concluded from Page 74)

—Decatur, Ill. The board of education has taken steps to erect fire escapes on all three-story school buildings. The action was taken in compliance with the state law.

—A second suit for $100,000 has been filed by Mr. Frank Fitzimmons, of Springfield, against the state board of education of the State of Illinois for money due him for construction work done on a normal school several years ago. The case was in the court some time ago when the Supreme Court decided against the complainant.

—Loudonville, Ohio. The board of education has brought suit against the school board of Mohican township, Ashland County, to collect the sum of $258 with interest for tuition claimed to be due.

—Coshocton, Ohio. The school board has denied a request of the high-school student-body for permission to hold school dances.

—The Attorney General of Ohio has ruled that a board of education cannot legally contribute toward the payment of the city solicitor's salary or that of an assistant solicitor for services rendered the board when such services are required as a part of the law department's official duties. The decision was given in response to a request of the Toledo board as to whether the board may not pay the salary of an assistant city solicitor to take charge of the condemnation proceedings necessary because of an extensive building program.

—Kenosha, Wis. The board has received an opinion from the city attorney to the effect that the city may offer physical facilities for the care and training of crippled children in the city. It is planned to include school equipment and apparatus for the use of crippled children.

—Kansas City, Mo. The board of education has begun an inventory of the stock of the school department. It is estimated the stock will inventory about $30,000.

—Madison, Wis. Mayor Schmedeman has proposed to the board of education a new plan for the control of school appropriations. Under the plan, the funds of the board would be retained by the city and paid out in twelve installments on demand to the treasurer. It is the belief of the Mayor that a large amount of money would be saved the taxpayers by the investment of the school money at a high rate of interest.

—St. Louis, Mo. The present administration offices of the board of education have been offered for sale. A new building will be erected for administration purposes.

The Supreme Court of Salem, Oregon, has reversed a decision of the Clackamas County Circuit Court, which awarded damages of $1,000 to Mrs. Rosamund Samuelson, a former Canby school teacher. It was alleged by Mrs. Samuelson that she had been libeled by statements published in the Canby newspaper. Mrs. Samuelson filed suit in the county court, alleging that she had been libeled by the members of the school board, and was awarded a judgment of $1,000, whereupon the board appealed the case to a higher court.

—Newark, N. J. The board of education has adopted a new code for regulating the all-year schools of the city. Under the rules, all-year high schools may not admit pupils from other schools during July and August. Students desiring to do summer work must attend the summer high school. The classical course, which had been discontinued at Central High School, has been restored.

Directors and supervisors of the general subjects will be employed as all-year teachers and will hold meetings for the all-year schools. Pupils graduating from the elementary schools in January must attend the regular high schools unless they elect commercial or technical courses.

—Cleveland, Ohio. Mr. A. A. Benesch, a member of the board of education, has submitted a resolution asking that corporal punishment be discontinued in the schools. The action followed the alleged whipping of a 13-year-old student.

—The Supreme Court of Illinois has denied a request of the Chicago board of education for a writ of mandamus to compel the county board of review to reassess 8,000 parcels of property which had been described as underassessed $1,006,425.

—Defiance. Ohio. Suits have been brought against the Highland and Noble township school boards for the collection of money alleged to be due the Defiance high school for tuition. The claim against the Highland board is for $2,168, and that against the Noble board is for $1,294. The Defiance school board has received a judgment for $549 in settlement of tuition money due from the Auglaize township board.

—Kalamazoo, Mich. The board of education has prohibited smoking and drinking in connection with plays presented in the high-school auditorium. Scenes showing liquor or requiring cigarettes must be deleted from stage plays in future productions.

—Omaha, Nebr. Architects Frederick W. and Edwin B. Clarke recently brought suit in the District court to collect $98,000 claimed as still due them for plans prepared for the Technical High School. Mr. Frank Woodland, attorney for the school board contended that the architects had been paid $300 or $400 more than their contract called for.

The attorneys for the architects contended that they did a year's work on plans for which they were not paid. Changes in the plans of the entrances and failure to use the first plans were the reasons for the increased cost of the architectural service.

The board of education, on its part, contended that the architects in signing the last contract on the building, had accepted $17,500 for the work they had done on former plans, and that they agreed to make further changes without additional charge over the stipulated percentage on the cost of the structure.

—Twin Falls, Idaho. All members of the board of education have taken out memberships in the Idaho Educational Association. The members regularly receive the circulars and publications issued by the Association.

—Creation of a league of Illinois school boards is the objective of the Illinois School Board Association which met recently at Belleville, for a two-day session. It is the purpose of the association to develop a permanent council to gather the latest innovations in the educational and the business end of school management and to distribute this information to school boards throughout the state. In pointing out the need for this service, Mr. L. J. Thiele, president of the association, said there are 11,916 distinct school boards in the state. These expend $150,000,000 in tax money and are responsible for the education of 1,500,000 children.

—The question of placing a bronze tablet on the new junior high school, bearing the names

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75 to 150	Med.	12½'	8⅜" x 4'	B2820	$5.90	B2823	$6.45	B2826	$8.10	B2829	$7.55
200	Med.	17'	11⅜" x 5'	B2821	8.35	B2824	8.90	B2827	11.10	B2830	10.55
300 to 500	Mog.	21'	14⅛" x 6'	B2822	11.65	B2825	12.80	B2828	15.60	B2831	14.45

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Lighting Equipment

ST. LOUIS, U.S.A.

of the fourteen members of the school committee has been raised at New Bedford, Mass. Charles F. Archambault, a member, contends that the expense which exceeds $100 should not be borne by the community. A local newspaper urges that the names of superintendent and principal be added to the tablet list.

—The offices occupied by the Cincinnati, Ohio, board of education in the Denton building will be vacated owing to the lack of needed space. The board is looking about for new quarters.

—Candidates for school board members at Spokane, Washington, are to be subjected to questioning by a local patriotic society as to their position on volunteer service of high-school boys in military organizations.

—Reuben W. Jones, secretary of the Seattle, Washington, board of education, was raised on a farm near Cambria, Wis. He worked as a boy three weeks for a neighboring farmer, picking hops at 25 cents a box. After working three weeks, he had $4.50 coming. Then the farmer went into bankruptcy and the lad never received a cent.

—The school board at Decatur, Ill., has been instructed by the state authorities to provide fire escapes on ten schoolhouses which are three stories high. The board is in doubt whether the buildings come under the provision of the law, and expects to submit the question for court action.

—Mr. Edgar Mendenhall, of the Kansas Teachers' College, Pittsburg, Kansas, has devised a very practical chart showing a desirable county unit organization of schools in the smaller communities. This type of organization tends to equalize educational opportunity in each county and its effectiveness may be supplemented by an appointed commissioner of education, with power to approve county superintendents.

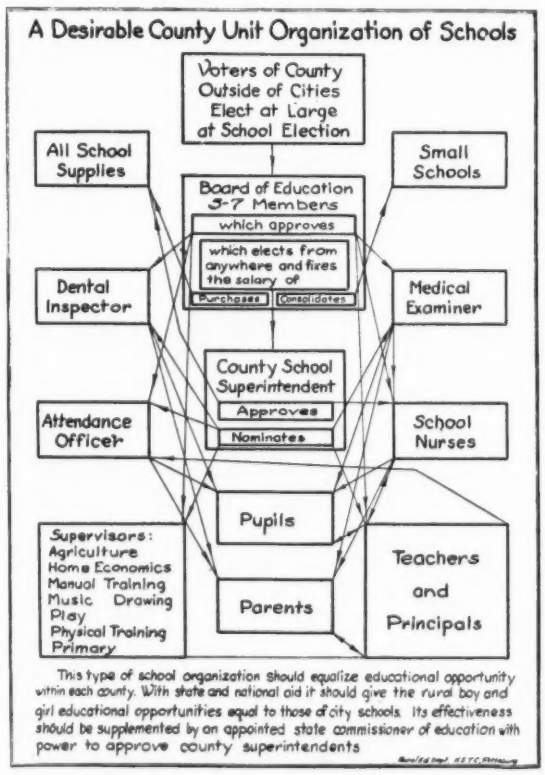
—Mrs. Virginia D. Green introduced a resolution in the Cleveland, Ohio, board of education abolishing corporal punishment. She held that whipping was an archaic form of brutality. Action on the motion was delayed.

—Supt. William J. O'Shea of the New York City schools has issued the following instructions to principals and other persons in charge of school buildings:

(1) Automobiles may not be parked and encumbrances and obstructions of any kind will not be permitted to remain on any part of the school site.

(2) Automobiles may not be parked and obstructions and encumbrances of any kind will not be permitted to remain in the streets adjoining school buildings, unless they are at such distances from the buildings that they do not interfere with the safe and rapid dismissal of pupils.

—New Kensington, Pa. Under a new rule, tuition will be refunded to students who discontinue school under certain conditions. The only conditions under which refunds will be made are personal illness of the students, illness in the family, or removal from the city. No refund will be made unless the student writes a letter stating the reason for requesting the refund. This is necessary in order to furnish a record of money paid out which can be filed.


A Desirable County Unit Organization of Schools
Voters of County Outside of Cities Elect at Large at School Election
All School Supplies
Small Schools
Board of Education 3-7 Members
which approves
which elects from anywhere and fixes the salary of
Purchases
Consolidates
Dental Inspector
Medical Examiner
County School Superintendent
Approves
Nominates
Attendance Officer
School Nurses
Pupils
Supervisors: Agriculture Home Economics Manual Training Music Drawing Play Physical Training Primary
Parents
Teachers and Principals
This type of school organization should equalize educational opportunity within each county. With state and national aid it should give the rural boy and girl educational opportunities equal to those of city schools. Its effectiveness should be supplemented by an appointed state commissioner of education with power to approve county superintendents

PLAN FOR COUNTY ORGANIZATION OF SCHOOLS.
Prepared by Mr. Edgar Mendenhall, Pittsburg, Kans.

—Milwaukee, Wis. With the opening of the second semester, all elementary domestic science and shop periods in the grades will be ninety minutes in length. The pay of each teacher will be based upon sixteen such ninety-minute periods per week as a standard load. The monthly bonus for elementary domestic science and shop teachers handling more than sixteen such periods will be proportionately the same as that paid to a teacher handling two single session schools per day in a primary schoolroom up to twenty such periods per week, when the household or shop teacher will be drawing the same as a first grade teacher handling two single session schools per day.

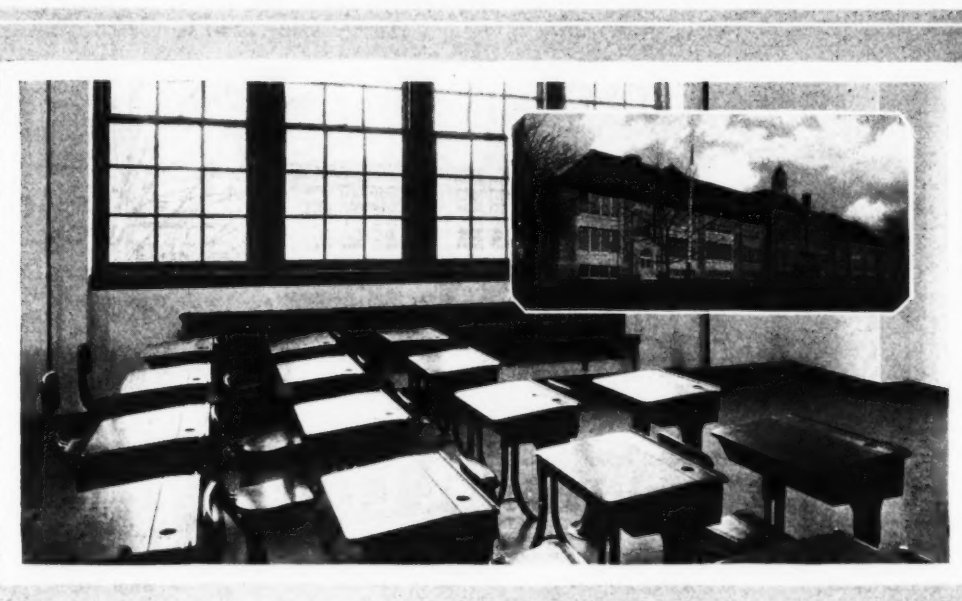
—Cincinnati, Ohio. The safety representatives of the schools have approved a form of school boy patrol in the interest of safety education and safety protection for the school children.

Schoolboys will be given official authority and will be recognized by the city officials and the traffic courts as having the same authority as traffic policemen.

—Omaha, Nebr. The school board has approved a plan for insuring eight new schools against fire and tornado. The new insurance totals $1,500,000 and followed a revaluation of the sixty buildings. Under the plan the board will carry $11,000,000 insurance on the sixty buildings, or an increase of nearly $400,000. A rebate of $2,975 will be given on premiums paid in advance.

—The Virginia State Board of Education has passed a new rule which raises the standard for high school principals appointed after Sept. 1, 1927. Principals of accredited high schools must have either a Collegiate Professional Certificate and two years' successful teaching experience, or a Collegiate Certificate and three years' experience.

FLOORING



The High School at Abington, Pa. DURAFLEX-A Flooring in classrooms and corridors
HEACOCK & HOKANSON, *Architects*

DURAFLEX-A FLOORS mean quietness, foot-comfort, ease of cleaning, super-durability, and economy in maintenance. Its repeated use is the sincerest testimonial of its real worth. The architects of the above school are recognized in this field and have used Duraflex-A in:

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ABINGTON HIGH SCHOOL
LANSDOWNE NATIONAL BANK
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Duraflex-A is the ideal flooring for schools, office buildings and hospitals. It forms a solid, seamless, impervious, rubbery surface, that cuts the cost of cleaning in half and can be patched at any time without showing joints or seams. It is proof against fire, water, and acids.

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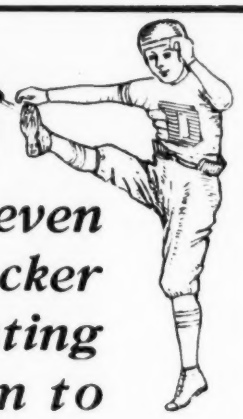
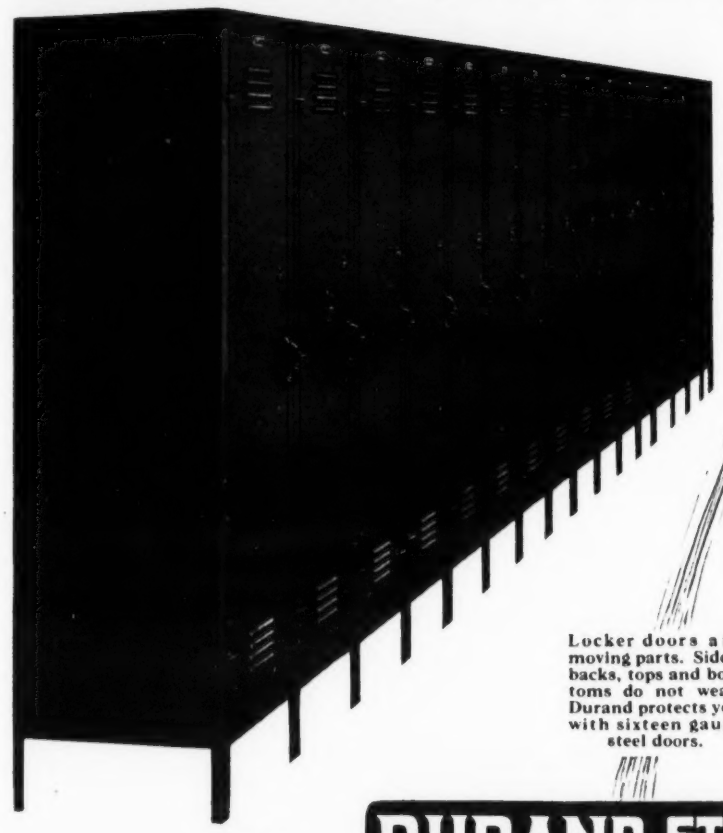


—but he couldn't even dent a Durand locker while demonstrating his kicking form to admiring team mates



Locker doors are moving parts. Sides, backs, tops and bottoms do not wear. Durand protects you with sixteen gauge steel doors.

It's because Durand Steel Lockers, with more than ample strength to withstand the assaults of the American school boy, are tougher than pigskin, sturdier than healthy varsity football players, last longer than the building in which they are installed, and look better than ordinary lockers because of symmetrical design and two coats of baked-on enamel.

Where shall we send the Durand Educational Institution Folder?

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BOSTON
NEWARK
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SCHOOL LAW

Schools and School Districts

Under the Missouri revised statutes of 1919, §11259, as amended by the acts of 1921, p. 654, if a proposed consolidated school district contains 200 or more children of school age, the territory of the district may be less than 50 square miles.—State ex rel. Hanna v. Ross, 286 Southwestern Reporter, 726, Mo. App.

The first resolution of the county school board annexing common school districts to an independent district was not in conformity with the acts of the 39th legislature of Michigan in 1925, c. 59 (Vernon's annotated civil statutes of 1925, arts. 2922a-2922l), did not deprive the board from passing a subsequent resolution conforming to law.—Henderson v. Miller, 286 Southwestern Reporter, 501, Tex. Civ. App.

Under section 4727, Ohio general code, as amended, 108 Ohio laws, pt. 1, p. 235, it is not mandatory upon the county board of education to detach from centralized school districts any of its territory, although petitioned for by two thirds of the qualified electors residing within the said territory; nor does section 4696, of the Ohio general code, as amended, 109 Ohio laws, 65, make it mandatory upon the board to transfer any territory of a centralized school district to another school district, although petitioned for by 75 per cent of the electors in the territory sought to be transferred.—State v. Hadaway, 19 Ohio App. 481, Ohio App.

School District Government

The charter of the city of Dallas, art. 5, § 1, providing that the board of education shall have exclusive control of the public schools, did not divest the state superintendent of all power of supervision.—City of Dallas v. Mosely, 286 Southwestern Reporter, 497, Texas Civ. App.

The board of education of the city of Dallas, under the state constitution and its own charter, has discretion to exercise any power relating to the school system not prohibited by law, which it believes will establish and maintain an efficient school system.—City of Dallas v. Mosely, 286 Southwestern Reporter, 497, Tex. Civ. App.

School District Property

The failure of a school district to retain twenty per cent of the contract price of a schoolhouse did not release the surety on a bond permitting alterations in the contract, after the surety had agreed to the payment of twenty per cent reserve before the completion of the work. — Employers' Casualty Company v. Irene Independent School Dist., 286 Southwestern Reporter, 539, Tex. Civ. App.

School District Taxation

The budget presented by the school trustees of a high-school district constitutes the basis for the levy of a special tax by the board of supervisors, who must levy a tax at a rate sufficient to meet the legal requirements set forth in the budget. (California constitution, art. 9, § 6, as amended in 1920; art. 3, § 1; art. 11, § 12.)—McDonald v. Richards, 248 Pacific Reporter, 1049, Calif. App.

The legislature may prescribe the method of collecting data on which the tax levy to maintain a high school is to be based by the board of supervisors, who, in levying such tax, are limited to determining the legality of different items of expenditure, legality of purposes for which made, and necessary rate of taxation, to raise the required amount. (Constitution, art. 9, § 6, as amended in 1920.)—McDonald v. Richards, 248, Pacific Reporter, 1049, Calif. App.

The government must resort to ordinary taxation, and not special assessments, to meet the charges for construction and maintenance of schools.—Guaranty Bank & Trust Co. v. Ward Lumber Co., 109 Southern Reporter, 496, La.

The question of policy and wisdom of incurring expenses in the conduct and maintenance of a high school is vested in the school trustees and not in the board of supervisors (California constitution, art. 9, § 6, as amended in 1920, art. 3 § 1, art. 11, § 12; political code, § 1612a). —McDonald v. Richards, 248 Pacific Reporter, 1049, California App.

Teachers

Where an applicant successfully passes an examination for a teacher's certificate the state superintendent has no authority in the absence of a statute, to refuse to issue a certificate on the sole ground that the applicant is less than 18 years of age.—State v. Matzen, 210 Northwestern Reporter, 151, Neb.

Pupils

The establishment of a health department is held within the discretion of the board of education (Charter of the city of Dallas, art. 5, § 1; Texas revised statutes of 1925, art. 2827). —City of Dallas v. Mosely, 286 Southwestern Reporter, 497, Tex. Civ. App.

Under the rules of a school health department, providing that no child should be excluded from school and that no treatment should be given except in case of emergency, it is held the rights of the city health department were not infringed upon.—City of Dallas v. Mosely, 286 Southwestern Reporter, 497, Tex. Civ. App.

An action by the village board of education will lie to restrain the county board of education from issuing a certificate to the county auditor and causing to be transferred from the funds of the village board to the county board fund, as provided for in section 7610-1, Ohio general code, a sum to reimburse the county board for money paid to a parent for transportation charges, as fixed by section 7731-4, Ohio general code, where the parent did not pursue his proper remedy either by compelling the village board to furnish transportation or having some action taken by the county board to secure transportation.—Batavia Village Board of Education v. Clermont County Board of Education, 19 Ohio App. 18, Ohio. App.

LAW AND LEGISLATION

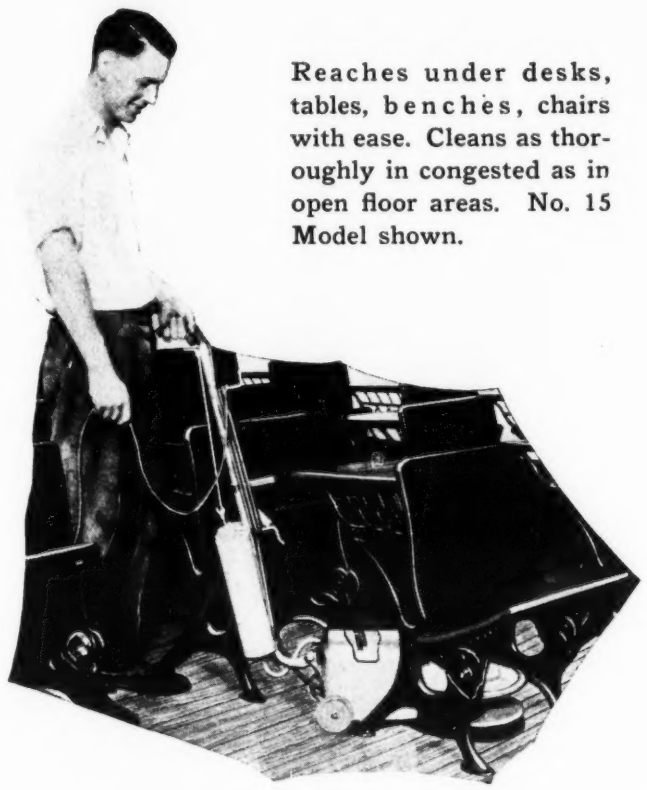
—A measure in Congress, known as the Gasgue bill, limits the price to be paid for school sites in Washington, D. C., to 125 per cent of the assessed valuation. The local board of trade opposes the measure.

—The county unit of school administration will be urged in the West Virginia legislation.

—A change is contemplated in the formation of the Indiana state board of education. The present board is composed of the superintendents of the schools in the three cities having the largest school enrollment, the presidents of three state schools, the state superintendent of public instruction and members appointed by the Governor. The new plan would have one member represent the township trustees, one the county superintendents, one the city superintendents, and a fourth the state's higher edu-

(Concluded on Page 82)

One Hour *vs.* 2½ Days!



Reaches under desks, tables, benches, chairs with ease. Cleans as thoroughly in congested as in open floor areas. No. 15 Model shown.

"TWO men, with a FINNELL electric scrubbing and polishing machine, can do the work **in one hour** that it used to take a woman 2½ days!"

This is but one of many similar statements by FINNELL users.

Think of the tremendous saving, both in time and labor, that a FINNELL could effect **in your schools!**

It would not only save money that is now being spent needlessly. The FINNELL would actually clean or polish every floor better than ever before.

Easy to operate as a vacuum sweeper, it scrubs the most obstinate dust and dirt from every crack and corner. Specially designed to operate efficiently under school desks and benches—in congested as well as in open floor areas. By a simple adjustment it lays wax and polishes wood or linoleum floors to a smooth (non-slippery) brilliance. Keeps floors beautiful and prolongs their life. All this at a cost of about 3 cents per hour for electric current!

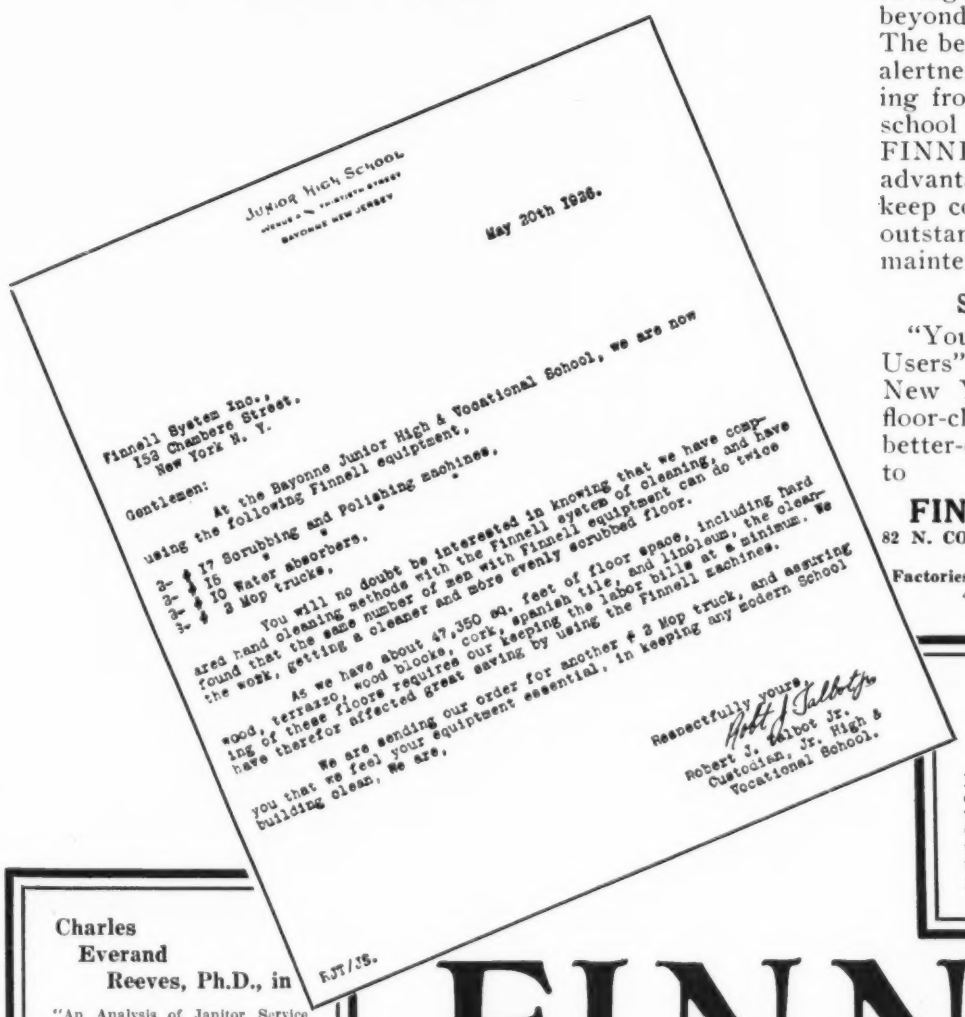
Letter at Left TYPICAL

The Bayonne, N. J., Junior High School expresses an opinion of FINNELL equipment and service typical of the scores of letters we receive from educational institutions throughout America. In almost every instance the saving in floor-cleaning cost is far beyond the expectations of the user. The benefits of increased health and alertness of school children resulting from greater floor sanitation in school buildings cleaned with the FINNELL are immeasurable. These advantages, coupled with low upkeep cost make the FINNELL the outstanding investment in building maintenance equipment.

Send for FREE BOOK

"Your Questions Answered By Users" tells how you can start the New Year right by cutting your floor-cleaning budget and having better-cleaned floors besides. Write to

FINNELL SYSTEM, INC.
82 N. COLLIER ST. HANNIBAL, MO.
Offices in principal cities.
Factories—Hannibal, Mo., and Ottawa, Ont., Can.
"Power Scrubbing Headquarters for Twenty-one Years."



Junior High School
Avenue A & Thirtieth Street
Bayonne New Jersey

May 20th 1926.

Finnell System Inc.,
152 Chambers Street.
New York N. Y.

Gentlemen:

At the Bayonne Junior High & Vocational School, we are now using the following Finnell equiptsent,

3- # 17 Scrubbing and Polishing machines.
3- # 16 Water absorbers.
3- # 10 Mop trucks.
3- # 3 Mop trucks.

You will no doubt be interested in knowing that we have compared hand cleaning methods with the Finnell system of cleaning, and have found that the same number of men with Finnell equiptsent can do twice the work, getting a cleaner and more evenly scrubbed floor.

As we have about 47,350 sq. feet of floor space, including hard wood, terrazzo, wood blocks, cork, spanish tile, and linoleum, the cleaning of these floors requires our keeping the labor bills at a minimum. We have therefor affected great saving by using the Finnell machines.

We are sending our order for another # 3 Mop truck, and assuring you that we feel your equiptsent essential, in keeping any modern School building clean, We are,

Respectfully yours,
Robert J. Talbot Jr.
Custodian, Jr. High & Vocational School.

RJT/CS.

ON DISPLAY
at the convention
IN DALLAS

FINNELL equipment will be on exhibit and will be demonstrated at the National Education Association Convention, Department of Superintendence, at Dallas, Texas. Be sure to see this exhibit. It will be worth your while.

Charles Everand Reeves, Ph.D., in

"An Analysis of Janitor Service in Elementary Schools," writes. "Scrubbing by mechanical means is superior to cleaning by mopping with a strong solution, because the latter injures the wood. Of the mechanical means of cleaning, the scrubbing machine is both far more efficient and far more rapid. The cost of a scrubbing machine is so little and the cost of operation so small, that practically every elementary school can afford to have one."

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ELECTRIC FLOOR MACHINE

It Waxes \ It Polishes \ It Sands \ It Scrubs

A FEW OF THE HUNDREDS OF EDUCATIONAL INSTITUTIONS USING FINNELL EQUIPMENT

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American School for Deaf, Hartford, Conn.
Baylor University, Dallas, Tex.
Bethany College, Lindsborg, Kan.
Boards of Education:
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Appleton, Wis.
Upper Darby, Pa.
Ardmore, Pa.
Audubon, N. J.
Baltimore, Md.
Bayonne, N. J.
Bement, Ill.
Benton Harbor, Mich.
Bethlehem, Pa.
Birmingham, Mich.
Bowling Green, Ky.
Buffalo, N. Y.
Cheyenne, Wyo.
Cleveland, O.
Danville, Ill.
Elizabeth, N. J.
Evanston, Ill.
Fairport Harbor, O.
Fort Worth, Tex.
Glastonbury, Conn.
Glen Ridge, N. J.
Highland Park, Mich.
Jersey City, N. J.
Johnstown, Pa.
Laredo, Tex.
Lawrence, Kan.
Lincoln, Neb.
Lockport, N. Y.
Madison, Wis.
Middletown, O.
Milwaukee, Wis.
Mt. Clemens, Mich.
Muskegon Heights, Mich.
Newark, N. J.
New Britain, Conn.
Oak Park, Ill.
Oakland, Cal.
Ontario, Cal.
Pasadena, Cal.
Paterson, N. J.
Pawtucket, R. I.
Pomona, Cal.
Pontiac, Mich.
Port Huron, Mich.
Richmond, Va.
River Forest, Ill.
Scotia, N. Y.
Tyler, Tex.
Wellsboro, Pa.
Wilmington, N. C.
Williamstown, Mass.
Wyandotte, Mich.
Hannibal, Mo.
Wilmington, Del.
Alameda, Cal.
Menominee, Mich.
Gastonia, N. C.
Windsor, Va.
Albert Lea, Minn.
Durham, N. C.
Piedmont, Cal.
Cornell University, Ithaca, N. Y.
Department of Education, Binghampton, N. Y.
Elgin Academy, Elgin, Ill.
Elvernia College, Chicago, Ill.
Hartford So. School District, Hartford, Conn.
Harvard University, Cambridge, Mass.
Kansas State Ag. School,, Manhattan, Kan.
LaSalle Extension University, Chicago, Ill.
Mass. College of Pharmacy, Boston, Mass.
Miami University, Oxford, Ohio.
Michigan Agric. College, Lansing, Mich.
Moler System of Colleges, Chicago, Ill.
National Farm School, Farm School, Pa.
N. J. School for Deaf, Trenton, N. J.
North Carolina State College, Raleigh, N. C.
Radcliffe College, S. Bridge, Mass.
Regis College, Denver, Colo.
Rice Institute, Houston, Tex.
State Normal School, Bowling Green, Ky.
State Normal School, Fayetteville, N. C.
State Normal School, Bellingham, Wash.
San Bernardino City Schools, San Bernardino, Cal.
St. John's Military Academy, Nashotah, Wis.

WASHABLE

···SO THEY OUTLAST IN WEAR AND BEAUTY

"Four years of use... no shade replacements"
Arthur Z. Boothby
Supt of Schools
Mamaroneck, N.Y.

AFTER three or four years of use, we are standardizing on Tontine in our shade equipment," writes Arthur Z. Boothby, Superintendent of Schools, Mamaroneck, N. Y. "Where we have been using Tontine, we have, as yet, made no replacements and find that these shades seem to stand up well against rain and storm damage."

Tontine Shades are built to withstand terriffic wear and abuse. Since they are impregnated with imperishable pyroxylin, the same material as Duco, they have unique merits,—merits that make them the most economical shades for schools:

—they are washable
—they are waterproof
—they cannot crack, flake or pinhole.

Aren't these the advantages you seek for shades in your school? Swatches on request.

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DU PONT
TONTINE
THE WASHABLE
WINDOW SHADE

(Concluded from Page 80)

cational institutions. The state superintendent would be an ex officio member. In commenting upon the proposed change the Indianapolis "News" says: "If five persons can be found who have exceptional qualifications, who can devote much time and constructive thought to the work in hand and who will merit and hold the confidence of the public, a five-member board can do as well as a board of thirteen. The small board plan succeeds or fails according to the quality of its personnel."

—The Supreme Court of Ohio made a ruling recently whereby street improvements made on school property are chargeable to school funds. Street improvements, as outlined by the supreme court in its decision, include paving, widening, sewers, water mains, sewer and water connections and street lighting. The supreme court decision, according to excerpts, is very clear in vesting the right to assess street improvement costs against school boards. An excerpt from the decision reads: "The general code confers upon municipal governments the authority to levy assessments for street improvements against property within such corporation belonging to a board of education and being used for school purposes. In the event of failure of such boards of education to pay an assessment so levied, an action may be brought by the municipal corporation to collect such assessment."

—The school committee of Chicopee, Mass., dismissed Miss Margaret H. LaMarsh as assistant principal. It is now urged that the mayor of the city veto the action of the school board. This course is deemed unusual and the mayor is uncertain of his authority in this direction. If it is found that the mayor possesses the power to veto the school board's action and should exercise it, it will require a two-thirds vote on the part of the school board to override it.

—L. R. Fults, superintendent of the Forest, Ohio, schools was arrested on the charge that he had unduly punished two boys. The defense holds that Mr. Fults was within the limits of his authority.

—Injunction proceedings have been started against Miss Emma J. Crone, county superintendent of schools, by the Plentywood, Montana, school district to prevent her from distributing the school funds to other districts which it is claimed belong to the Plentywood people. The law provides that the county superintendent shall apportion this money to the school districts on the basis of the number of children between the ages of 6 and 21 years shown on the clerk's lists. It also provides that each clerk shall take the census during the month of September and furnish the superintendent with a correct list. For years, Miss Crone asserts the Plentywood district has been "padding" its list thereby getting money which should have gone to the other districts. Miss Crone says she detected the errors last year in time to compel E. H. E. Helgeson, Plentywood's clerk, to strike off several names from the list he had submitted. Then she made an investigation of the lists submitted the two previous years of her administration, when Claus Tang was clerk and L. J. Onstad, chairman of the board, and says she found "padded lists" had been submitted both years.

—The Michigan Education Association proposes that the state superintendent be appointed by the state board of education instead of elected by popular vote. The recent eruption whereby the state superintendent was dropped by the governor has precipitated action in the matter.

THE NEED FOR PROFESSIONALISM

It takes a big man and a big purpose with hard work for all concerned to have a harmonious school atmosphere. But it's strain, friction, and jealousy, not work and poor salaries, that are "killing" teachers as well as driving them from the profession. The cure for it all is a profound sympathy—a sympathy properly translated, not "a being sorry for," as it is so often defined, but with its true meaning, "a feeling for another, joy in his joys, and sorrow in his sorrows." Let us inject more professional spirit, ethics, and sympathy into ourselves and our profession and then teachers will not be leaving the ranks for other work.—Lillie E. List, Beaver, Pennsylvania.

—Thomas E. Johnson, the deposed state superintendent of Michigan, has instituted legal proceedings against his successor, Wilford L. Coffey, on the ground that Governor Groesbeck was without authority to appoint him to an office which was not vacant.

—The constitution of Texas provides for a state board of education which consists of the governor, the comptroller, and the secretary of state. It is now proposed to secure legislation whereby the state superintendent of public instruction will be appointed by that body instead of being elected by popular vote. The Houston "Post" says: "The idea of having the head of our school system a politician who must run about keeping himself in the public eye and heeding every cross current of political opinion in order to hold his position is obnoxious to any conception of efficiency in the office. Those superintendents who have served the state well have done it in the face of great obstacles."

—The Supreme Court at Springfield, Illinois, recently denied a writ of mandamus sought by the Chicago board of education to compel the board of review to raise the assessments on 8,000 pieces of property in the city. The writ was denied because it had been filed so late that the court could not take original jurisdiction of the matter during the current term.

The decision of the Court was received with some relief by the officials of the board of review who feared that the whole tax collecting machinery of the county would be held up and the various agencies suffer from the lack of funds. The board holds it operates in the interests of the taxpayers rather than the tax collectors and that an increase last year brought many complaints from taxpayers.

—The New York State Court of Appeals has abrogated the so-called "thirty day" rule of the New York State Teachers' Retirement Board for preventing "death bed" claims of teachers, in a decision affirming the lower courts and directing payment to Helen M. O'Brien, as a beneficiary of her sister, Margaret O'Brien, a Buffalo school teacher.

QUIET, PLEASE!

SPEECH is curbed, muffled . . . an intermittent whisper now and then—and yet distraction . . . a room full of scuffling, scraping, active feet shout out loud. For the library in school or college, Stedman has originated and perfected a floor that is quiet . . . that actually absorbs the noise of clattering feet, of chairs pushed back.

Quiet, indeed . . . and Stedman Reinforced Rubber Flooring has these additional definite qualities: foot comfort, sure footedness, beauty of color and design, resistance to wear, no maintenance cost and it does not originate dust.

Ask us to show you—a member of the building committee—how we would floor your school.

J. H. Stedman
NATURIZED FLOORING PATENTED

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"Originators of Reinforced Rubber Flooring"

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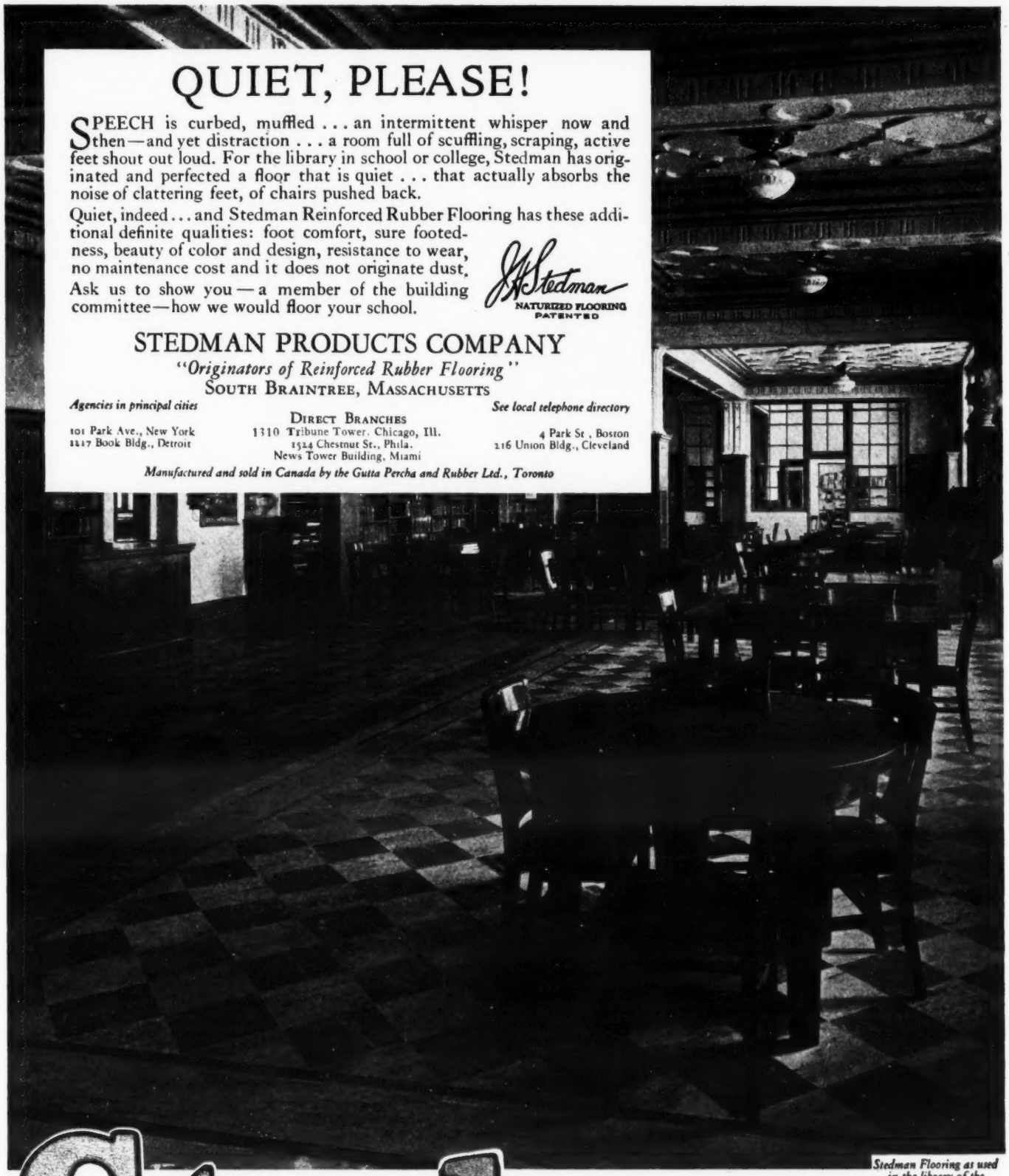
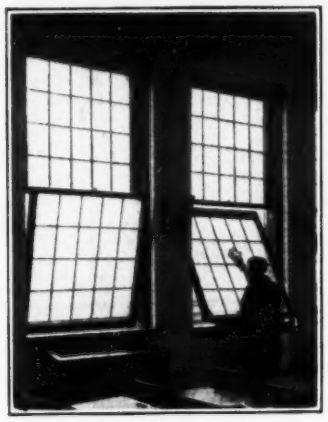


Stedman Flooring as used in the library of the East Denver High School Denver, Colo.

Stedman

REINFORCED RUBBER FLOORING

"Williams" Reversible Window Fixtures



The complete reversibility of the sash permits window cleaning from inside of the room with ease and absolute safety.

OUTSTANDING FEATURES:

Ideal Overhead Ventilation
Reversibility for Inside Cleaning
Greater Light Area
More Weathertight Construction
Better Shading Facilities
Simplified Frame Construction
Weightless Windows

Williams Reversible Window Equipment is installed only by factory trained mechanics, assuring efficient workmanship and proper operation of equipment.

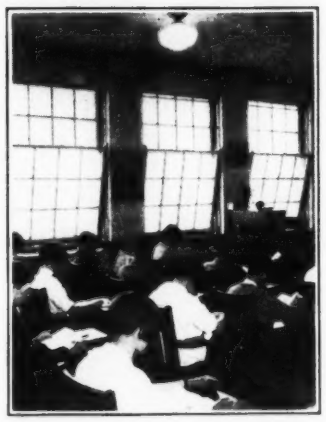
John D. Chubb, Architect, Chicago, Ill.

In the Senior High School, Marquette, Mich.

The specification, installation and service of Williams Plank Frame Reversible Windows in the Senior High School, at Marquette, Michigan, typifies the adaptability and the national acceptance of Williams Plank Frame Equipment for schools. The demand for a schoolhouse window that will lend itself to good appearance, that is reversible for cleaning and that is conservative in cost is satisfied by Williams.

Let us send you further particulars and list of installations near you.

The Williams Pivot Sash Company
E. 37th St. and Perkins Ave. Cleveland, Ohio.



Provides ideal over head ventilation facilities by merely tilting either or both sash.

SCHOOL FINANCE AND TAXATION

FAVORS THE PAY-AS-YOU-GO PLAN

"The time to inaugurate the pay-as-you-go plan in the matter of schoolhouse construction is when the building program has been caught up and when there is no likelihood that new structures will be demanded in the near future." So reasons the board of education of Denver, Colorado.

Its $8,550,000 building program adopted several years ago is completed and the board says: "Now the community is in a position to choose whether it wants to go on a pay-as-you-go plan or continue on the fall-behind-and-catch-up plan."

The board of education is recommending the pay-as-you-go plan and has made out its budget on that basis. This involves an increase in taxes above the five per cent increase which the board is allowed to make. It may be done only after the approval of the state tax commission. At the regular monthly meeting in October the board passed a resolution that the request to the tax commission be made.

If the request is granted, it will mean a fund of approximately $500,000 available each year for new buildings.

COST OF INSTRUCTION IN NORTH CAROLINA

In the December issue of "State School Facts," the Department of Education of North Carolina presents a comparison of the cost of instruction and certain items affecting this cost, between the white elementary and white high schools of the state; and in addition, the cost of instruction in the colored schools.

The study shows that it cost an average of 34.8 cents to instruct a white pupil enrolled in the high schools of the state in 1925-1926, whereas it cost an average of 14.1 cents to instruct each white pupil in the elementary schools of the state. In other words, the cost of instruction in the elementary schools is less than half the cost in the high schools.

A significant feature is the fact that the difference in the cost of instruction between the rural and city schools is very slight in the high schools, whereas in the elementary schools, the difference is from four and a half to five and a half cents for each of the years studied.

On the basis of attendance, the daily per pupil cost is greater, since the total number of pupils enrolled are never present every day. It is still true that the cost of instruction in the high schools is more than twice that in the elementary schools. It is also true that in the high schools the daily cost of instruction is slightly greater in the rural schools, whereas in the elementary schools, it is from four to five cents more in the city schools.

The number of pupils enrolled in the school affects the enrollment basis. In white high schools, there were an average of 22 pupils to each teacher employed. In the elementary schools for white children, there were 35 pupils enrolled to each teacher employed. This means that the average elementary teacher gives instruction to thirteen more pupils than the average high school teacher.

The percentage of enrollment in attendance indicates to what extent the children take advantage of the schools. The calculations for the three years, 1923-1924, 1924-1925, 1925-1926, show an improvement in this respect. However, white high school pupils attend better than white elementary pupils; white elementary pupils, in turn, attend school better than colored pupils. City high school pupils attend school best of all.

The report shows the tendency of the training level of the teaching profession to be gradually raised in both rural and city, elementary and high, white and colored schools of the state. It shows that the greatest need of improvement in the training of teachers is in the rural elementary schools.

The material is presented in summary form for the last three years, and in detail for the several school units of the past year, 1925-1926, and is based upon the facts obtained from county and city school budgets.

THE NEW YORK SCHOOL BUDGET FOR 1927

Why over one hundred million dollars are needed for the year 1927 for the public schools of New York City was explained recently by Dr. Edward Stitt, associate superintendent, in a public address.

Dr. Stitt shows that at present there are accommodations for school children in 889 buildings, 31,660 teachers, principals, and superintendents, and 1,001,715 pupils. The cost of maintenance, the constant need of buildings, the amount necessary for supplies and textbooks, and the salaries of teachers unite in one great problem of civic administration which for 1927 will amount to $132,595,000.

The largest item in the budget is that required for salaries of teachers. When it is realized that the initial salary of the teacher is only $1,500, it will be readily agreed that the amount is none too great. At least fifteen years of preparatory training and education are necessary before a teacher can enter upon the career of teaching.

Another reason for the increased cost of education is that the plan and scope of public eduaction has advanced within recent years. At present there are 37 high schools attended by over one hundred thousand pupils, and requiring the services of 5,100 teachers, over five times as many as we used in the elementary schools in 1853.

Formerly there were no classes for children under 6 years of age. At the present time there are over eleven hundred kindergarten teachers who take the little children at the beginning of their educational careers, and give them a happy start upon their school life.

Evening schools for adults have greatly increased in importance. In 1849 there were only six evening schools and an attendance of 1,224. Today, there are nearly a hundred evening elementary, high, and trade schools, and the budget request for adult education for 1927 is $1,700,000.

The present state law requires the establishment of continuation schools for pupils who have not finished their education. Pupils who have not graduated from high schools and who are less than 17 years old must attend a con-

(Continued on Page 87)

Columbia University Scientists Select CELESTIALITE (PATENTED) NEXT TO DAYLIGHT

Consulting Electrical Engineers Kaiser, Muller & Davies of New York City.

The committee of scientific men which directed the choice of equipment for the new fifteen story Physics Building for Columbia University selected Celestialite after careful comparative tests.

SCIENTIFIC men know better than most of us what a marvel Nature has wrought in creating the human eye and they know, too, that Nature made the eye for daylight.

So that when Celestialite is selected for such a building we have convincing and unprejudiced evidence that Celestialite gives the best substitute for actual daylight.

Celestialite is a patented glass of three layers—made in strict accord with the best scientific knowledge.

The three layers of glass—one clear—one translucent white and one blue — (corresponding in effect to the clear air, the white clouds and the blue sky) combine with the Mazda lamp to give an illumination which is the closest to actual daylight which man has been able to make for general lighting purposes—it is "Next to Daylight"—a light soft and grateful to the eye but powerful to see by.

Celestialite Division

GLEASON-TIEBOUT GLASS COMPANY

Fifth Avenue Building New York City

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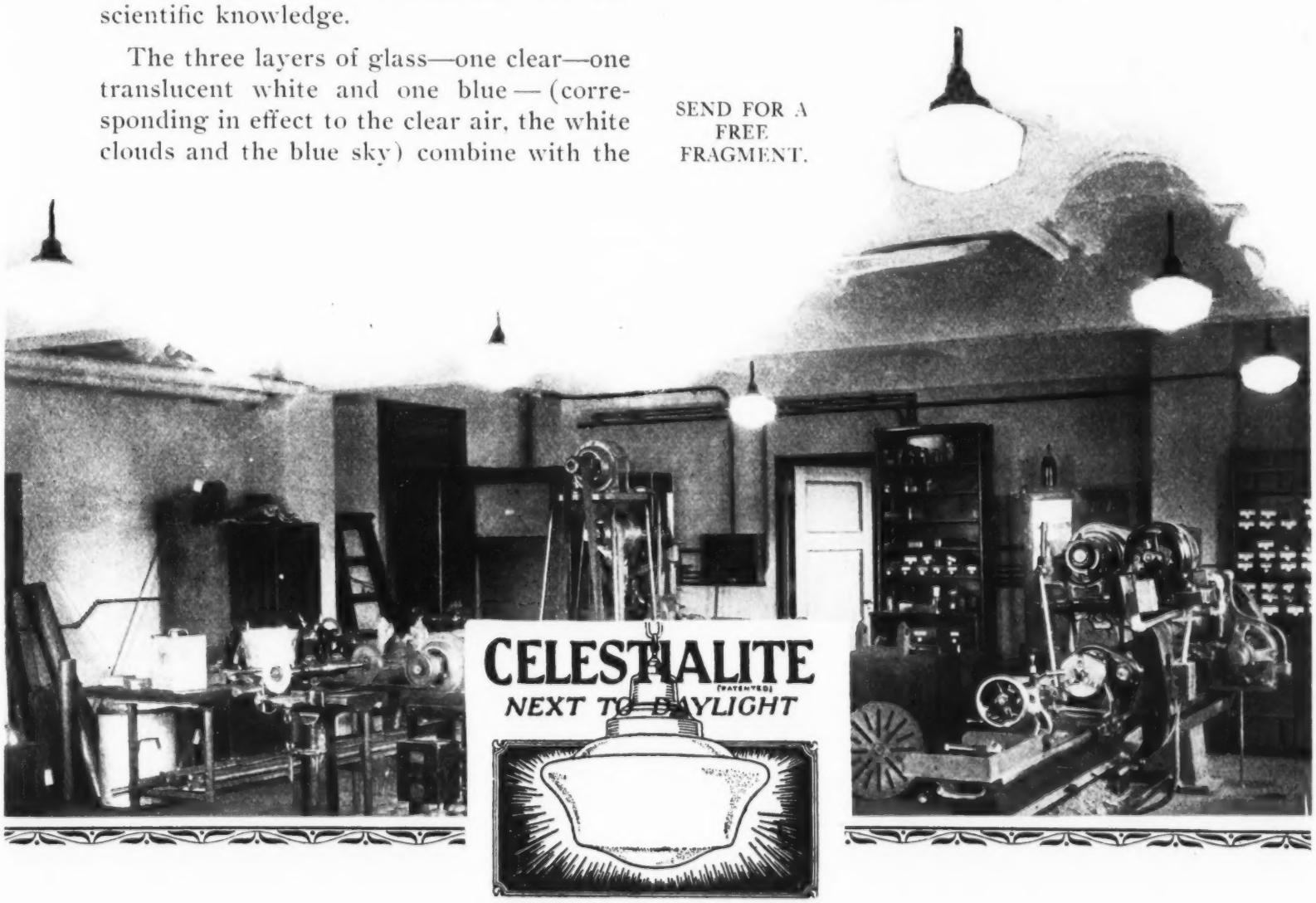


Experience *Is* the Best Teacher

Teachers College, Columbia University

A leaking roof or corroded water pipe teaches an expensive lesson in the economy of using rustproof metals.

This pipe was taken from Teachers College Building, Columbia University, after a few years' use. It was not BRASS. *It convinced the Trustees that nothing but* BRASS *pipe would eliminate further replacement costs.* BRASS *pipe has now been installed.*

You can profit by the experience of others if you eliminate from your school budget this year the unnecessary items of repair and replacement due to corrosion.

Install

COPPER roofing

BRASS pipe

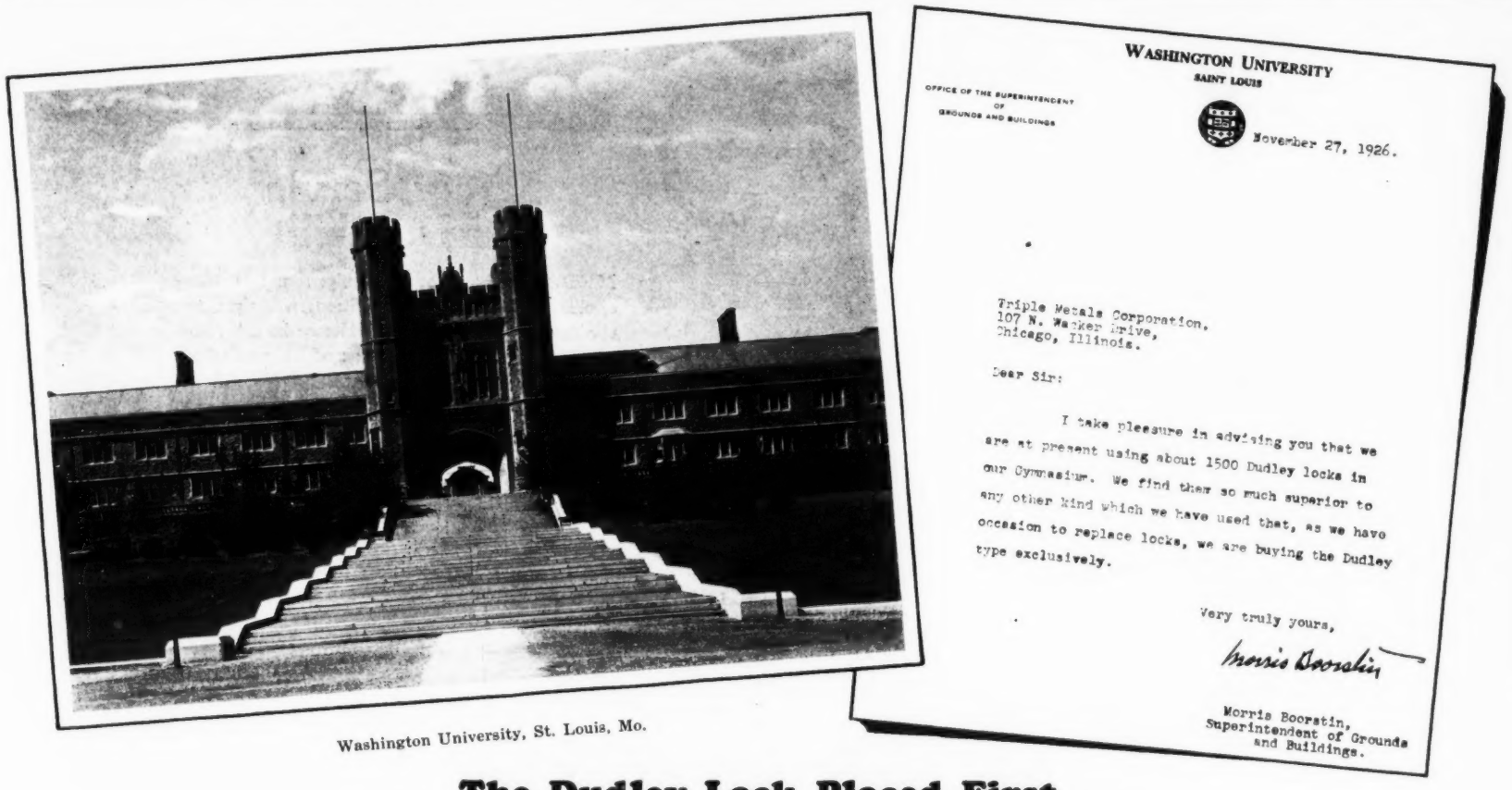
BRONZE or BRASS hardware and lighting fixtures

COPPER and BRASS never rust. The first cost is the last.

COPPER & BRASS RESEARCH ASSOCIATION

25 Broadway – New York

METALS THAT NEVER RUST – COPPER, BRASS AND BRONZE



Washington University, St. Louis, Mo.

WASHINGTON UNIVERSITY
SAINT LOUIS

OFFICE OF THE SUPERINTENDENT OF GROUNDS AND BUILDINGS

November 27, 1926.

Triple Metals Corporation,
107 N. Wacker Drive,
Chicago, Illinois.

Dear Sir:

I take pleasure in advising you that we are at present using about 1500 Dudley locks in our Gymnasium. We find them so much superior to any other kind which we have used that, as we have occasion to replace locks, we are buying the Dudley type exclusively.

Very truly yours,

Morris Boorstin

Morris Boorstin,
Superintendent of Grounds and Buildings.

The Dudley Lock Placed First

By Another of America's Progressive Educational Institutions

Colonel Boorstin tells you exactly why **Washington University** is satisfied with the Dudley.

It is first because it positively assures locker protection. It immediately eliminates your key nuisance and at the same time gives you absolute control over your entire locker system through our Master Chart service.

Many schools are already taking advantage of our special **self-financing plans** enabling them to secure Dudley locks without a cent of investment on their part.

Send **today** for detailed plan and sample Dudley lock for free examination. **Our exhibit space at the Dallas Convention is No. 603. We shall be glad to see you.**

TRIPLE METALS CORPORATION
328 WEST WASHINGTON STREET - Department 16 - CHICAGO, ILLINOIS

(Continued from Page 84)

tinuation school four hours each week. In these schools, various branches of commercial education are taught, and also vocational activities. The boy or girl with a "blind alley" job is helped to prepare for a better position.

Today we have classes for all kinds of handicapped children and all types formerly denied school privileges. In 1927, it is planned to have 370 classes for ungraded or defective children, 7 classes for the blind, 68 sight conservation classes, 43 classes for the deaf, 138 classes for crippled children, 161 open air classes, and 35 classes for tubercular children in hospitals and sanitariums.

Modern traffic conditions make street play dangerous and almost impossible. Playgrounds for schools must be used during the summer. For these activities, and for community centers, and adult recreative purposes and vacation schools, over half a million dollars are necessary.

THE DETROIT SCHOOL BUDGET

The maintenance fund budget of the board of education of Detroit, Mich., for 1927-1928 shows a total of $22,195,359 for operating the schools during 1927-1928. To this is added a deficit of $100,000, which gives $22,295,359, as the amount to be reviewed by the board of education.

The annual budget is made up in two main divisions known as the maintenance fund and the capital cost fund. The difference between them is that the maintenance fund provides for expenditures that must be met over again, year after year, while the capital cost fund deals with expenditures that are rather permanent, such as lands, buildings, and equipment.

The total of both the funds for 1927-1928 will be about $31,000,000, of which $22,195,359 will be for maintenance, and $8,804,641 for capital costs.

The amount finally agreed upon for the budget is provided in three ways, namely, through taxation, through bonds, and through contributions by the Federal government, by the State government, and through fees by certain of the students. The probable amount from each source will be as follows: Taxation, $18,794,580; bonds, $7,000,000; from the state and federal governments, and from other miscellaneous sources, $5,205,420.

On the basis of the figures given, it is evident that the amount provided for annual maintenance from other sources than taxation, namely, $5,205,420 is nearly one fourth of the $22,195,359, which is estimated as necessary to conduct the schools during the fiscal year. The state will furnish the schools with $4,500,000, which is Detroit's share of the state primary school fund.

The total amount estimated for the maintenance fund, $22,195,359, will be expended for seven general purposes, as follows: Administration, instruction, auxiliary agencies, fixed charges, operation of plant, and maintenance of plant.

FINANCE AND TAXATION

—The Wayne township schools near Wapakoneta, Ohio, closed December first for lack of funds to continue operation. The enforced vacation continued until January third.

—Supt. W. R. Curtis of Alton, Ill., recently presented a report to the board of education in which he showed how the school costs have been reduced. The instruction cost based on the average daily attendance has been reduced practically 25 per cent, from $80 per pupil in 1922 to $61 in 1926. The reduction in costs has been largely effected by the employment of fewer but better teachers. It has been found practical to increase the size of classes per teacher within limits, in the case of normal children. The results achieved show that efficiency has not suffered by increasing the size of classes.

—At the request of State Supt. S. M. N. Marrs, the state comptroller of Texas has ordered the transfer of $1,166,666 from the general revenue to the credit of the available school fund. This is the first payment of the special supplemental appropriation of $3,500,000 made at the last legislative session.

—The board of education of Cleveland, Ohio, has been ordered to pay the city between $400,000 and $500,000 for civic improvements which have benefited school property. The action is the result of a ruling of the Supreme Court which held that boards of education stand in the position of property owners in the matter of benefits from civic improvements.

—More than 200 high and grade school pupils of Salem Township, Auglaize County, Ohio, were out of school from December first to January first because of a shortage of operating funds.

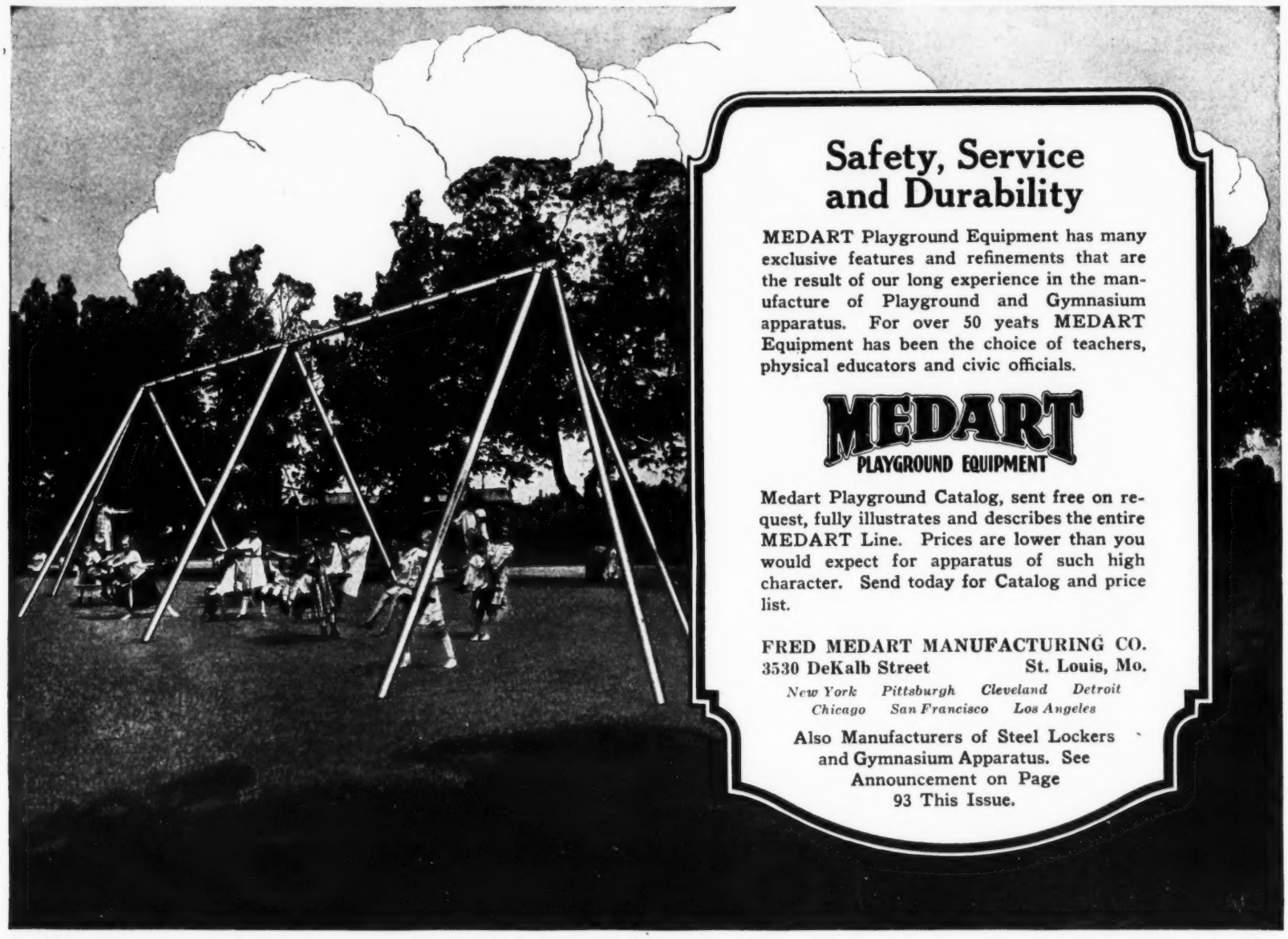
—Hood River, Oreg. The school board has adopted a budget calling for an expenditure of $11,550 for the ensuing year.

—A resolution adopted by the Carroll County, Tennessee, teachers' association advances the following recommendations: "Retention of the tobacco tax for the school fund; tax on soft drinks and cosmetics; to let elementary schools include only six grades, junior high two grades, and the senior high four grades, to lighten the work in the elementary one- and two-teacher schools so that the classes may have more attention and be able to make the grades in the allotted time; uniform election laws for county superintendents in all of the counties of the state; copies of the resolutions are to be furnished the direct representative, traveling representative and the senator of the incoming legislature." The resolutions were prepared by Prof. J. D. Mullins, superintendent of the McKenzie city schools, R. C. Austin, of Trezevant, E. E. Wright of Hollow Rock and E. H. Harrell of McLemoresville.

—State Superintendent John Callahan of Wisconsin recommends a tax on cosmetics and cigarettes in aid of the state school fund.

—"The general property tax sins against the cardinal rules of uniformity, equality, and universality of taxation," said Dio Rechardson of Seattle, member of the Taxation Committee of the Washington Education Association. "It presses hardest on those least able to pay. It imposes double taxation on one man and grants entire immunity to another. In short, our system as it is today is so flagrantly inequitable that its retention can be explained only through ignorance or inertia. It is the cause of so much injustice that every thinking man and woman in the state should set about to find relief."

—According to a recent United States bureau of education report the funded debt for cities having over 30,000 population in 1925 amounted to $2,987,369,056, and that for schools amounted to $874,058,824 or a per capita of $21.45, the school debt representing 29.3 per cent of the total. In 1915 for the 204 cities in this class


Safety, Service and Durability
MEDART Playground Equipment has many exclusive features and refinements that are the result of our long experience in the manufacture of Playground and Gymnasium apparatus. For over 50 years MEDART Equipment has been the choice of teachers, physical educators and civic officials.
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PLAYGROUND EQUIPMENT
Medart Playground Catalog, sent free on request, fully illustrates and describes the entire MEDART Line. Prices are lower than you would expect for apparatus of such high character. Send today for Catalog and price list.
FRED MEDART MANUFACTURING CO.
3530 DeKalb Street St. Louis, Mo.
New York Pittsburgh Cleveland Detroit
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Also Manufacturers of Steel Lockers and Gymnasium Apparatus. See Announcement on Page 93 This Issue.

the debt for general purposes amounted to $1,969,601,729, and for schools, $344,783,605, or a per capita of $11.06, the school debt representing 17.8 per cent of the total.

The per cent of the total debt issued for school purposes is much larger for the smaller cities. For the cities having a population of less than 50,000 in 1925, 40.3 per cent of the total was for schools, while in the cities having over 500,000 population, 21.1 per cent was for schools.

—Springfield, O. In the fall of 1923, the citizens defeated a proposition providing for an extra levy for school purposes, with the result that at the end of the school term in June, 1924, there was a deficit of over $60,000. In the following fall, the voters approved an extra three-mill levy, which has been in operation for two years. The money derived from this levy has eliminated the deficit, has made possible repairs and new equipment in the way of maps, dictionaries, etc., and has accumulated a surplus of $147,000 in the general fund, $127,000 in the sinking fund, and $40,000 in the teachers' retirement fund.

During the year 1927 it is planned to use only two of the three mills voted two years ago. The surplus in the general fund will be used for the erection of a ten- or twelve-room grade school.

—Chicago, Ill. The school board has asked the city council to grant for all school purposes out of the taxes for 1927, collectible in 1928, $75,500,000, including the loss and cost of collections. The school board's demands, including both educational and building funds, exceeded by $7,500,000 the total requested for 1926. The 1925 tax levy produced $56,967,000 in 1926. The total requested for buildings and sites was $25,000,000.

It is expected there will be a surplus of $10,515,162 in the educational fund. Of this amount, $5,200,000 was immediately available for meeting the January payrolls, teachers, and several other groups of employees.

—After examining the financial condition of the Cincinnati, Ohio, school system, B. B. Vance, state examiner, approved the work of C. W. Handman, business manager, Randall J. Condon, superintendent, and Robert W. Shafer, clerk of the school board. Two criticisms, however, were submitted. The policy of paying teachers for absences incurred through attending educational conferences was held to be illegal. Again, the payment of $69,975 to teachers who were absent owing to illness seemed a rather large sum to the examiner.

—At Mason City, Iowa, a schoolhouse located in the business section of the city was burned down. The new school is to be built near the residence section. The old site is used for a playground, but the suggestion is made that the site be leased on a long term for business purposes.

—President Morton in opening the meeting of the School Directors' Association of Lackawanna County, Pa., flayed school directors, who practice economy at the expense of the schools of their district. "I believe," he added "in true economy, however, which consists in getting one hundred per cent value for every dollar, but it is not in this saving economy which all too many school boards practice to the detriment of their interests."

—The schools of Moulton township, near New Bremen, Ohio, which were threatened with forced closing before the end of the school year, were able to continue in operation through funds raised by the sale of three abandoned school buildings. A policy of rigid economy practiced by the school board made it possible to continue until the 1927 school funds become available.

—Charlotte, N. C. A system of bookkeeping and budgetary control has been introduced by the board of education. It is expected that a total of $794,435 will be available this year for inclusion in the budget.

—Injunction proceedings have been begun against County Supt. Crone, by the Plentywood, Mont., school district, to prevent the return to other districts of the balance of the money the district owes as a result of alleged padding of the census in past years. Under the law, the county superintendent must apportion this money to the school districts according to the number of census children between the ages of 6 and 21 years.

—Wheeling, W. Va. The school board has begun an intensive study of the question of platoon classes, with a view of introducing this plan of organization in the schools.

A plan for the complete redistricting of the Missouri rural schools in order to equalize the educational advantages and expense of the various parts of the state has been outlined by State Supt. Charles Lee. The plan will be presented in the form of a bill to the state legislature.

Under the new plan, it is proposed to organize larger school units, a board of education for each county, and state aid to provide backward counties with proper school facilities.

Under the present plan, large and wealthy districts were located side by side with small, weak districts. One district would have a good building, good equipment, and good teachers, while another would have a poor building, little equipment, and inefficient teachers. The valuation supporting each child varies from $600 to $27,000.

—Belleville, Ill. The finance committee of the board has reported that $42,068 of the building indebtedness of the school district has been liquidated, and that only $128,000 remains to be paid off.

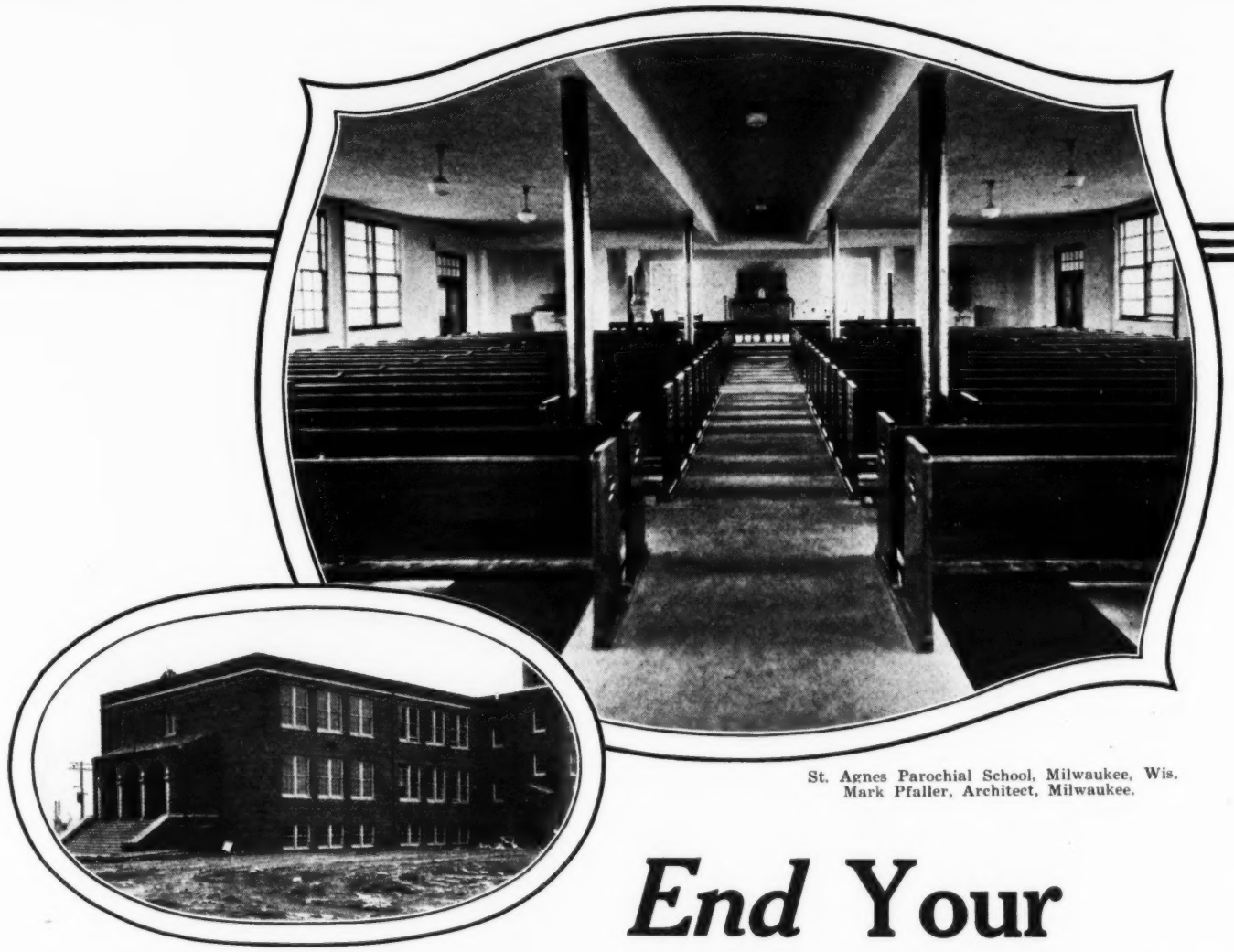
—The Illinois Teachers' Association, through its school fund committee, will attempt to secure a revision of the present distributive law. The committee finds that, under the present law, more state funds go to districts with high ability and little need than go to districts with low ability and great need. Since the purpose of the state distributive fund is to effect equalization of educational opportunity, it is the opinion of the committee that the fund be apportioned according to the needs of the districts.

A study of the assessed value back of each child shows that it varies from $5,757 in Quincy to $926 in West Frankfort. For 39 smaller cities, it varies from $5,748 in Winnetka, to $836 in Johnston City.

—LaSalle, Ill. The board of education favors an advance in the apportionment of school taxes from state revenues from one and one-half cents to three cents a school day. It is shown that the present low rate of one and one-half cents is inadequate for the smaller districts and works a hardship in rural districts.

—Joliet, Ill. The school board has authorized the sale of $100,000 in tax anticipation warrants,

(Concluded on Page 90)



St. Agnes Parochial School, Milwaukee, Wis.
Mark Pfaller, Architect, Milwaukee.

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SCHOOL floors know what wear is. No wonder so many "wear out."

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Asbestone will last as long as the building. It is resilient—and easy to the tread—highly fire resistant; dustless—easy to keep clean.

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The cost is very low, and there's no upkeep.
You have a floor that stays new.
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Modern School Building calls for Berloy Lockers

A recent addition to the long list of Berloy equipped school buildings is the Broadway Junior High School, Toledo, Ohio. School Board Officials disposed of the locker problem with modern equipment and in a modern manner — Berloy Steel Lockers recessed in corridor walls.

Berloy Steel Lockers invariably satisfy particular buyers, because they possess fine finish, unusual rigidity and durability—such qualities as you would demand in lockers for your school.

There is a Berloy representative in your locality who will gladly supply you with complete literature and offer suggestions in planning your installation, entirely without obligation. Write the nearest office.

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(Concluded from Page 88)

which brings the total of warrants sold to $400,000.

—Akron, O. In order to reduce the budget for 1927, the school board has ordered shorter hours of study to reduce the light bill, and has required that pupils pay for pencils, paper, and drawing materials. The board is considering the elimination of free textbooks.

—Hartford, Conn. A total of $3,719,774 will be required for educational purposes during the fiscal year, which represents an increase of about $700,000 over last year.

—The per capita cost of operation and maintenance of schools in 247 cities of the country for 1925 was $14.03, according to estimates of the U. S. Department of Commerce. The total of the expenditures amounted to $571,827,138 in 247 cities with populations of 30,000 or more. The cities studied represented 35.3 per cent of the total population of the country.

—St. Louis, Mo. The board of education has adopted a resolution favoring an amendment of the Missouri constitution requiring that all bonds in state courts be recorded immediately and that they become liens on real estate owned by the persons signing them. The action was taken after it had been reported that the board had not received its full share of the forfeitures due to the fact that the judges had accepted as bondsmen persons of little or no adequate financial security, and that they had also failed to proceed against persons to have the forfeitures reduced to judgments.

—A bill having the support of the state educational department of West Virginia will shortly be introduced in the legislature. Under the bill, users of cigarettes will be required to pay a tax of one cent on each ten-cent package of cigarettes, and a proportionate amount on each fifteen-cent package. It is estimated that the passage of the law would turn more than $1,000,000 into the state treasury for the benefit of the state's school fund.

—Expenditures for instruction, operation, and equipment of Idaho public schools, exclusive of high schools, for the year ending June, 1926 amounted to $7,023,260, according to statistics of the 1926-1927 directory just issued. The assessed valuation of the districts was $475,761,968, and the value of the school property increased from $20,484,811 to $20,990,900. The bonded indebtedness was reduced from $11,844,406 to $11,526,225.

—Akron, Ohio. The board of education has been compelled to reduce the school expenditures in order to meet a restricted budget for the year 1926-27. The board will have $256,000 less in 1927 than in 1926. Teachers' salaries and the length of the school year have not been affected by the general program of retrenchment.

—Peoria, Ill. The board of education has adopted a program of rigid economy in order to meet a financial crisis. The board will take full advantage of its borrowing power to meet expenses to and including the May payroll.

—Indianapolis, Ind. The failure of the taxable valuation of the city to be increased to the extent anticipated has forced another financial problem on the school board. The 1927 valuation which has been certified at $646,749,380 for the city is below the $652,000,000 on which the school system based its budget for 1926-27 and its tax levy for 1927. The new valuation will cause a loss in revenue of $26,000 in each of the two succeeding years.

—Bridgeport, Conn. An increased appropriation of $55,019 has been approved by the board of education for the coming fiscal year. The increase is attributed to the salary increases for teachers and to other matters beyond the control of the board.

—Rockford, Ill. The school board will expend $327,000 more for school purposes in 1927 than in 1926, according to a budget recently approved. The total requirements for educational and building purposes next year will be $1,790,693, as against an expenditure of $1,473,316 this year.

—Willsboro, N. Y. The voters of the school district have approved a resolution calling for a bond issue of $150,000 for the erection of a high school. The project was carried by an almost unanimous majority, only four votes being registered against the bond issue. This was taken to mean an added interest in the welfare of the school children and a desire to meet the need for adequate housing facilities.

—Lancaster, Pa. An election was recently held to determine whether the school district may borrow $1,000,000. The money will be used to enlarge three schools, and to erect a new grade school.

—Bayonne, N. J. The city treasurer, as custodian of school money, has been asked to transfer $25,000 from the current expense account to the building and repair fund, as directed in a decision of the state commissioner of education.

—A deficit of $23,719 has been noted as a result of an audit of the independent school district at Allen, Okla. The deficit is attributed to the issuance of warrants in excess of the approved appropriation. The general fund had a deficit of $8,710 and the sinking fund a deficit of $15,009.

—Joliet, Ill. The board has offered for sale $100,000 in tax anticipation warrants. With the sale of this issue, the board will have disposed of $400,000 in tax anticipation warrants.

—Middletown, Ill. The school board closed the year with an estimated balance of $100,000 on hand. The saving was effected through rigid economy in repairs and renovations, and through economies along other lines.

—Expenditures for Florida schools more than doubled in 1926 over those for 1925. The total spent for buildings and equipment have quadrupled over last year, and the value of school property has been raised by $15,979,407. The total expenditures for schools amounted to $31,054,264, as compared with $14,997,248 last year.

—Hamilton, Ohio. The board of education has given the depository banks permission to decrease the amount placed as security for the deposits. In the past, the banks have been required to place as security ten per cent more than the amount deposited. In the future, the banks may reduce the security to a point where the security exceeds the balance of the deposit by ten per cent.

—Ft. Worth, Tex. The school board has contracted for the sale of $750,000 in bonds. The bonds were dated January 1, 1927.

—Meriden, Conn. The board of education has asked permission to float a bond issue to secure funds for needed equipment. The bond issue will reach approximately $90,000.

—Newburyport, Mass. The school board has adopted a budget of $153,711, which is $9,000 more than last year.

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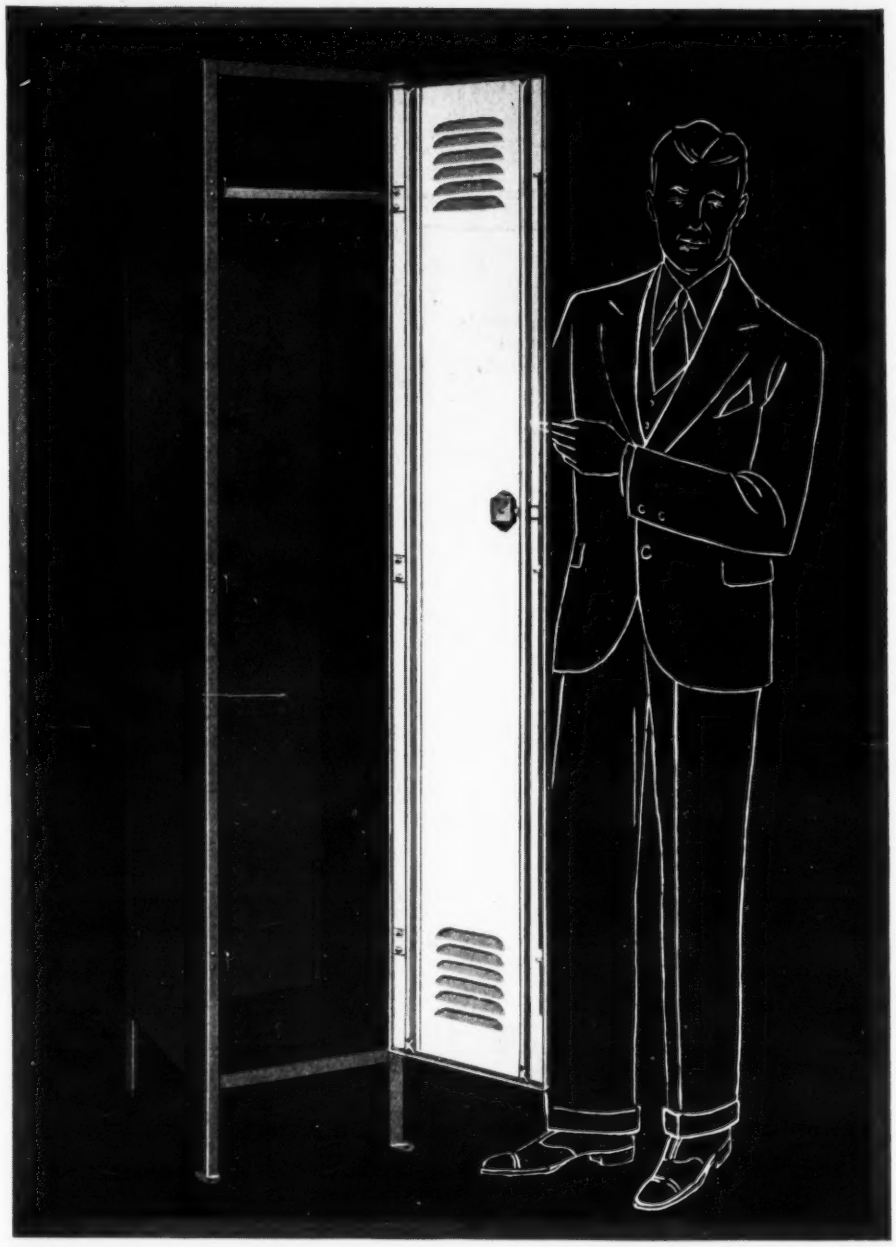
By

CORRECT PRINCIPLES OF STEEL FABRICATION



The cold rolled, furniture steel sheet of which a Lyon Steel Locker door is made is considerably wider than the finished door.

This extra width is formed back along the inside of the door, and, about an inch from each side, is formed into V-shaped reinforcements extending the full length of the door. The edges are then electrically welded.

This door construction gives the strength and rigidity of eight thicknesses of metal at right angles to the plane of the door and gives a double thickness of steel to hold hinges and the locking mechanism which engages the frame at three points.

The rigidity achieved by using this method of construction is augmented by lapping and spot welding the corners of the door. As a result there is no "give" to the door of a Lyon Steel Locker, nor are there any sharp edges. Lyon rigidity will be apparent if you shake the door or throw your weight against it when you test lockers for your school installation. Better still, it will be apparent after years of school use.

Use also will prove the rigidity of the locker frame, the quality of the finish, the strength of the hinges, and the positiveness of the locking device. Lyon Steel Lockers stand, in installations large and small, in schools all over the United States. Lyon Engineers helped plan many of these installations. Their experience is at your service. Perhaps your plans are at the point where such service will mean most to you. Write about your plans and your needs.

We have district offices and representatives in all principal cities.

Note this door construction. *This cross section of a Lyon Locker door shows how the steel sheet, wider than the door, is formed back along the inside of the door and is shaped into V-shaped reinforcements the full length. The edges are electrically welded.*

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437 Smithfield St.
ROCHESTER, N. Y.
61 South Avenue
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BUILDING NEWS OF THE SCHOOLS

A SUMMARY OF BUILDING OPERATIONS AT LOS ANGELES, CALIFORNIA

Mr. W. E. Record, business manager of the board of education at Los Angeles, California, has issued a report in which he shows the accomplishments in the way of building activities during the past two years. The report shows the school buildings under construction; the buildings for which plans are now in course of preparation, and buildings which have been completed since July, 1925.

The buildings now in course of construction total 39, of which there are twenty elementary schools, erected at a cost of $1,557,326; six junior high schools, erected at a cost of $1,089,943; eleven senior high schools, erected at a cost of $2,693,832, and two bungalow schools, at a cost of $13,630. The total cost of the group was $5,364,731.

The buildings for which plans are in course of preparation include twenty structures, erected at a total cost of $2,388,500. Of these, eight are elementary schools, erected at a cost of $499,750; four are junior high schools, erected at a cost of $605,000; seven are high schools, erected at a cost of $1,282,150, and one is a bungalow school, erected at a cost of $1,600.

A total of 223 buildings have been completed since July, 1925, at a cost of $13,942,720. These include 115 elementary schools, erected at a cost of $7,719,439; nineteen junior high schools, erected at a cost of $2,716,313; 27 senior high schools erected at a cost of $3,239,333, and 62 bungalow buildings, erected at a cost of $267,635.

NEW SCHOOL BUILDINGS

—The auditoriums and stages of existing elementary and high schools in New York city have not been constructed, it is now discovered, to permit dramatic performances requiring scenery, draperies, drops, spot lights, top border lights, footlights, etc. The fire regulations of the city forbid this. It will require a large expenditure to equip the buildings for dramatic performances.

—Long Beach, Calif., has completed its eight million dollar school building program. The second senior high school building erected at a cost of $1,350,000 completes the program.

Notable progress in educational affairs has been made in Vermont in the last two years, according to Clarence H. Dempsey, state commissioner of education, who finds that sixteen new school buildings have been completed in that period and three more are under construction. Interest in schools and their improvement has been stimulated by an appropriation of $30,000 by the legislature for state aid, and socalled Proctor prizes of $100 for each of the fourteen counties for the greatest improvement in building and grounds.

—Cincinnati, Ohio. Supt. R. J. Condon recently addressed the principals of the junior and senior high schools asking that the help of students be enlisted in deciding upon names of famous men to be engraved on the walls of the new Western Hills High School. The pupils were asked to write the names of those, who in their opinion, had made the greatest contribution to human welfare.

—Two additional district superintendents are needed in the Borough of Queens, New York City to take care of the extensive growth of school population in the Borough. It is estimated that within the next two years, the Borough will have a total of 180 school buildings built, under construction, or planned.

The establishment of at least four new districts, in charge of two district superintendents in Queens Borough has been recommended by Supt. Mandel. In view of the vast building program planned for the Borough, Supt. Mandel believes a second additional district school head is necessary.

—The school board of Cincinnati, Ohio, has for some time endeavored to try out window ventilation in the schools. This is not permissible under the state building code, which requires a more expensive and less effective kind of installation.

At a recent meeting of the board, a committee was appointed to work toward an amendment of the building code so that window ventilation may be permitted. It is desired to include window ventilating systems in the new school buildings about to be constructed. It is planned to erect at least six new buildings in the near future.

—An organization of custodians, assistants, and helpers in the public schools of Denver, Colorado, has been formed as an outgrowth of the summer school for janitors and engineers held at the Colorado Teachers' College, Greeley.

The meetings are held monthly in the evening, the first hour being devoted to a consideration of technical problems, followed by half an hour of social intercourse, and games or exercises in the gymnasium. Inspirational addresses are given by the superintendent of schools and principals, and lectures or talks on such subjects as carpentry, painting, care of heating plants, plumbing, and electrical machinery, by men in charge of school maintenance and repairs. Much has been accomplished in improving methods of maintaining and cleaning school buildings, and in the standardization of cleaning materials.

—Durham, N. C. The school board has taken steps to carry out a definite building program under the new bond issue recently voted. A building committee has been appointed to inspect school sites and to study the immediate needs of the school system.

—Birmingham, Ala. Property owners in the vicinity have raised objections to the erection of a colored school on Ninth Avenue. Objection was made because of its location in close proximity to a school and playground.

—Detroit, Mich. The new budget of the board of education calls for the expenditure of $7,123,773 for new school buildings and for additions to existing structures. It is expected that the gross budget of the board for the fiscal year will exceed $30,000,000.

The building program calls for the erection of twenty new buildings, three of which will be elementary schools.

—Blissfield, Mich. The board of education has employed the architectural firm of Lane, Davenport, & Peterson, of Detroit, to prepare plans for an addition to the high school. The building will be completed by January, 1928.

—Cleveland, O. The board of education has asked the Common Pleas court to permit the transfer of $1,000,000 from the general fund to the building fund in order to hasten the erection of new buildings and complete the maintenance work which has been started. A number of the school buildings are in need of immediate attention in the matter of painting and repairs.

—Houston, Tex. The board of education has made plans to complete about fifty building projects with the $4,000,000 bond issue which is available. Business Manager H. L. Mills, reporting to the board, showed that $1,000,000 remains to be spent, and some thirty projects are under way, leaving about the same number for which sketches have been made. It is expected that the present program will be completed by September, 1927.

—Houston, Tex. A survey of the crippled children of the city has been ordered with a view of establishing a school.

—Minneapolis, Minn. The school board has been asked to name one of the new schools for Charles Hoag, the first superintendent in Hennepin County, and the man who gave Minneapolis her name.

—Supt. J. B. Richey, of McKeesport, Pa., has announced the opening of a million-dollar building program.

—Minneapolis, Minn. The school board has been asked to approve of a bond program prepared by Supt. W. F. Webster and Business Supt. G. F. Womrath. The bond program

(Continued on Page 95)

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February 1, 1927.

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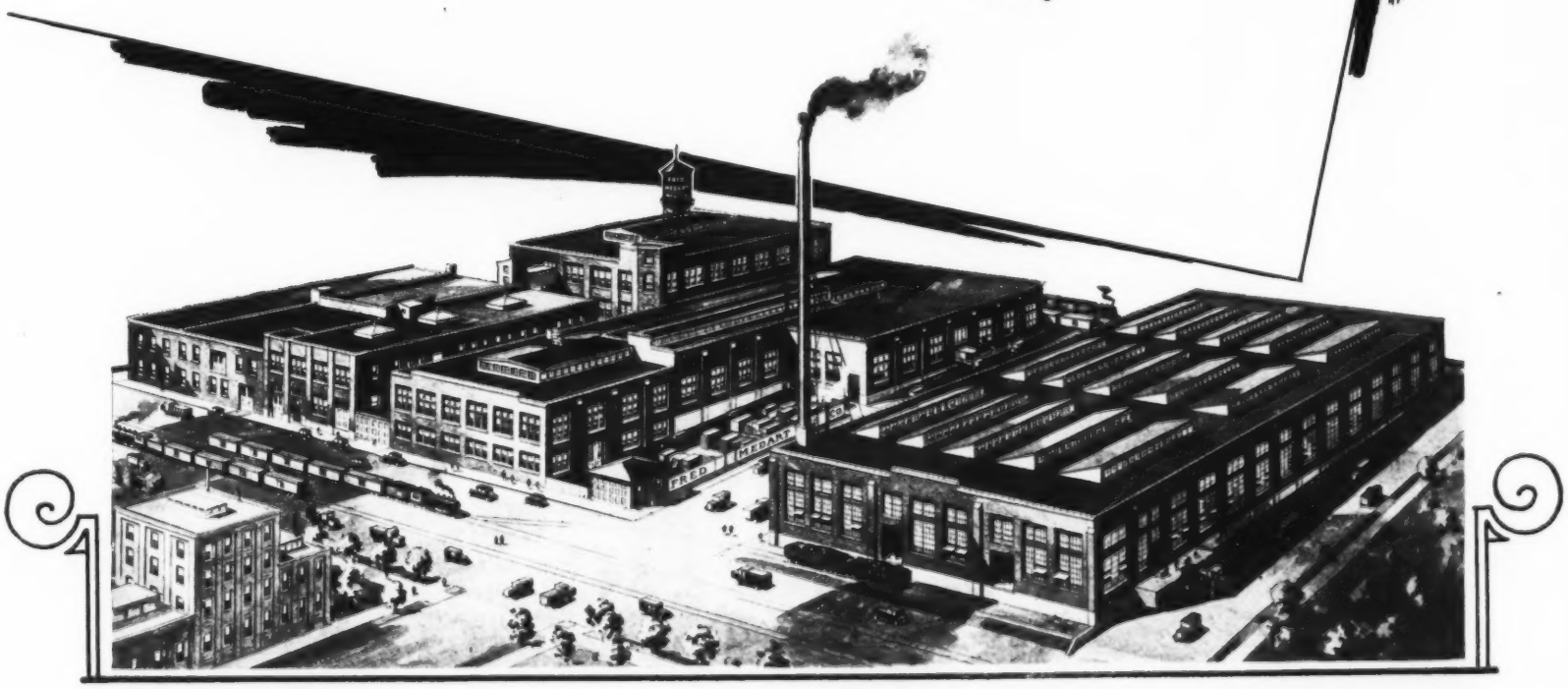

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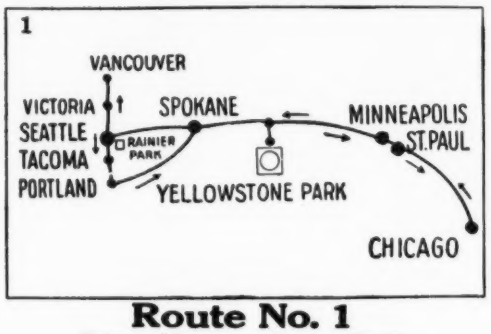
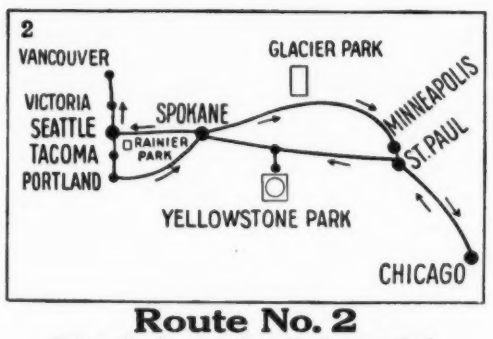
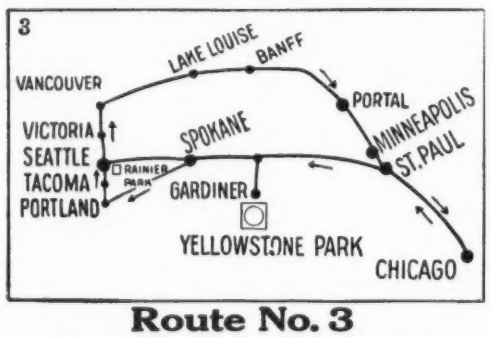


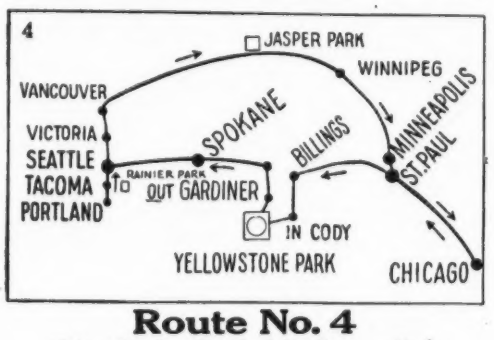
Route No. 1
Going and Returning—Northern Pacific



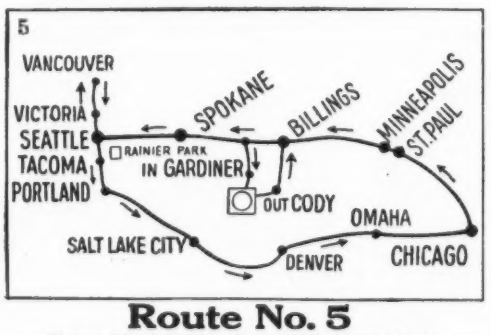
Route No. 2
Going—Northern Pacific and Yellowstone Park
Returning—Great Northern and Glacier Park



Route No. 3
Going—Northern Pacific and Yellowstone Park
Returning—Canadian Pacific and Lake Louise and Banff



Route No. 4
Going—Northern Pacific and Yellowstone Park
Returning—Canadian National and Jasper Park



Route No. 5
Going—Northern Pacific and Yellowstone Park
Returning—Union Pacific

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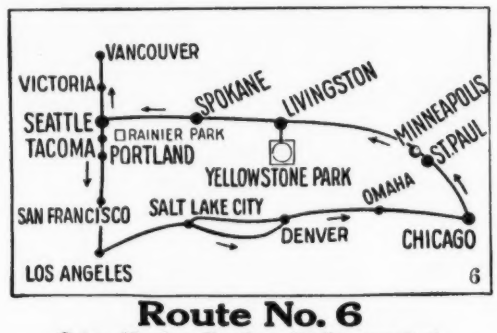
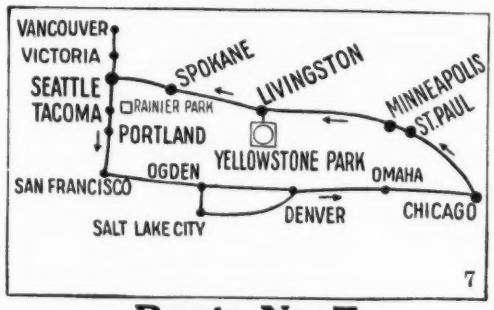
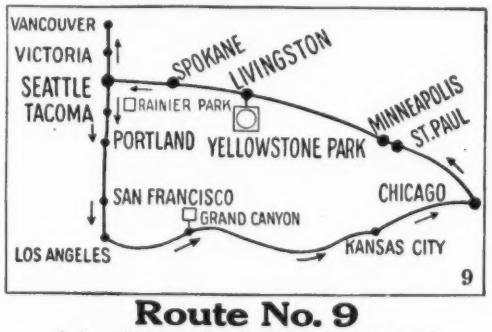


Route No. 6
Going—Northern Pacific and Yellowstone Park
Returning—Via Salt Lake and Colorado

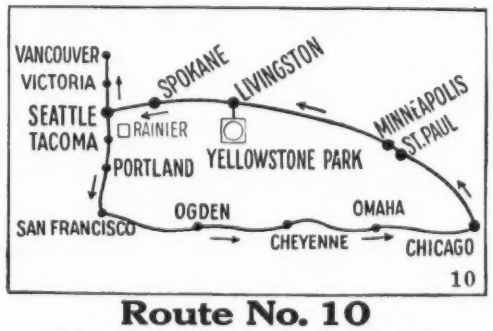


Route No. 7
Going—Northern Pacific and Yellowstone Park
Returning—Via Ogden or Salt Lake and Colorado

Route No. 8
Going—Northern Pacific and Yellowstone Park
Returning—Rock Island



Route No. 9
Going—Northern Pacific and Yellowstone Park
Returning—Santa Fe and Grand Canyon Park

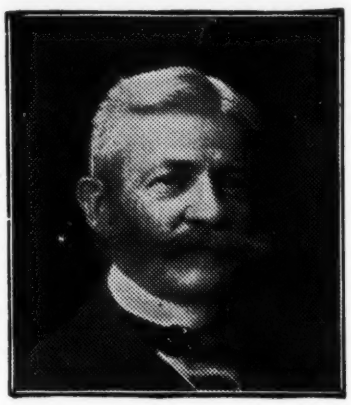


Route No. 10
Going—Northern Pacific and Yellowstone Park
Returning—Southern and Union Pacific Direct

Northern Pacific Railway

"First of the Northern Transcontinentals"

160



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HOLDEN PATENT BOOK COVER COMPANY
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(Continued from Page 92)

ranges from $1,250,000 to $1,300,000, and includes $500,000 for a vocational school.

—Joplin, Mo. The board of education has effected the sale of $375,000 in bonds remaining from the $750,000 bond issue of November, 1925. The issue was sold at a bid of $381,382, which is a premium of $6,382.

—Indianapolis, Ind. The school board has adopted plans for the new Shortridge high school and for a revised program giving attention to the improvement of the ventilating systems. The Shortridge school will cost $1.-075,000, not including the architects' fees. Bids for the structure were received about January 14th.

—The State Board of Education of Delaware has asked the state treasury for an appropriation of $2,000,000 for new schools in the state. The fund is asked in view of the fact that there appears to be a surplus of several million dollars in the state treasury.

—Hoopeston, Ill. At an election held on December 7, the citizens voted to erect a new high school. The present plan is to erect the first unit of the school; this unit to consist of a gymnasium and six classrooms. The building will be located on a former college site, which originally consisted of a college building and 225 acres of land.

During the past year the school board purchased additional playground space. The ground is rather extensive and cost $9,000.

The school board will issue $140,000 in bonds for the erection of a new school, to be located on the Honeywell site.

—The trustees of the Bellows Free Academy at St. Albans, Vt., will erect a building for the secondary education of pupils from the township, which will include those from the city as well.

—Seymour, Ind. The school board has taken steps to erect an eight-room grade school. The building will be fireproof.

—Long Beach, Calif. During the fall term the school board completed an extensive building program covering a five-year period, and involving an expenditure of between $7,000,000 and $8,000,000. A second senior high school was opened in September, the building and grounds of which represented an investment of $1,350,000.

—Seymour, Ind. The four grade schools have been renamed by order of the board of education. Instead of being designated by ward or street, the schools will bear the names of men who have been great educators or literary men.

—Fresno, Calif. An extensive building program is being carried out, at an estimated cost of $1,800,000. Of the total amount, $1,100,000 will be spent for high schools, and $700,000 for elementary schools.

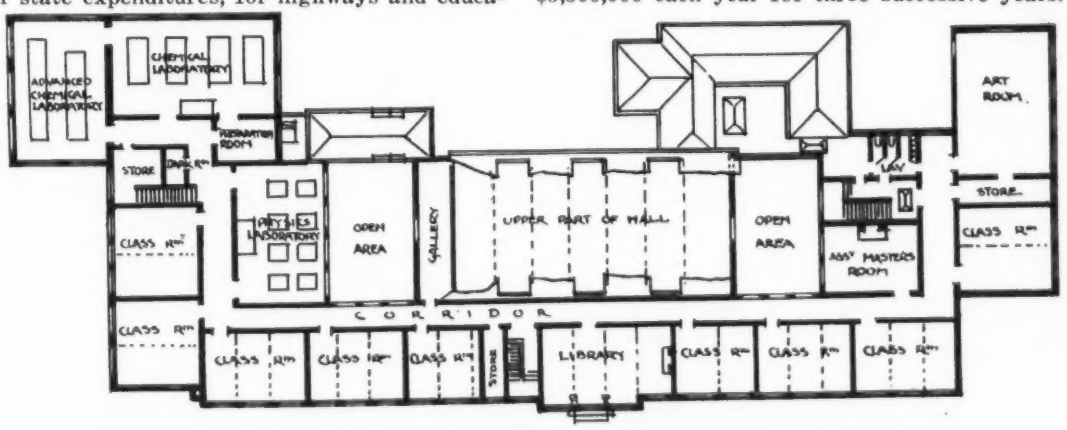
—Houston, Tex. An extensive building program has been carried out during the past two years, at a cost of $7,000,000. Eight new high schools have been completed, at a cost of from $500,000 to $750,000.

—Springfield, Ohio. The taxes for the year 1926 are less than for the year 1925, since the 1926 tax duplicate has been decreased by $81,033 under the duplicate for the preceding year.

The school appropriation was reduced $51,500, or from $1,021,573 to $970,072. The yield from the 2.65 mills school tax levy will be $58,390 more in 1926 than in 1925. The taxes raised through the school levy will remain in the county for use by the local schools.

—"In Wisconsin there are two main purposes for state expenditures, for highways and education," said Thomas Duncan, a member of the legislature. "Highways consume $48,000,000 annually, and schools, $53,000,000. Of the highway expenditure, $16,000,000 is paid for by automobiles and $32,000,000 by property. The school expenditure is financed primarily by a property tax; during the last two years the income tax has been a factor in this. These two sources account for approximately $100,000,-000 out of the $130,000,000 spent annually. If there are to be economies or savings that are material, these must come out of highways or schools. Wisconsin makes 50 per cent more provision for the training of teachers than any other state in the Union. There are nine state normal schools, 31 county normal schools, 22 high schools with teacher training courses, and a college of education at the University of Wisconsin. With all this there is no central administrative body to coordinate the educational functions in the state."

—The legislature of New York state is confronted with the question of tax reduction or increased state aid for schools. The New York City contingent is supporting the Friedsam Commission which demands an increase of $18,000,000 for the school support next year, and $5,500,000 each year for three successive years.



BEC SCHOOL, LONDON, ENGLAND.
G. Topham Forrest, Chief Architect to the London County Council. (See Page 61.)

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The success and adoption of the CONTINENTAL SCHOOL SCALE as a standard thoughout the country was made possible by our scale engineers who studied school weighing and measuring requirements thoroughly, and designed a scale to meet these most exacting demands.

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The outstanding features of this School Scale aside from its permanent accuracy—which is a CONTINENTAL characteristic — have proven themselves in America's best schools.

The agate beam bearings and Die Cast Beam, which will not rust, bend or warp, make possible the extreme accuracy and long life of this scale.

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Patented Improved Lever Construction holds mechanism secure, preventing it from becoming disengaged when moved about.

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CHICAGO, ILL.

—Lorain, Ohio. An extensive building program, to involve an expenditure of $557,000, has been adopted by the board of education for the year 1927. The largest single item in the program will be the building of an addition for the Hawthorne school, at a cost of about $85,000.

—Minneapolis, Minn. The board of education will continue its construction program with the erection of one junior high school, two grade schools, and the first unit of a vocational high school. The 1927 building program will involve an expenditure of $1,300,000. A large part of the money will be used for the purchase of new building sites.

—The building program completed during the past year in St. Louis County, Minn., reached a total of $250,000, according to Supt. C. H. Barnes. A new program for the coming year will include the construction and remodeling of schools to the amount of $115,000. A junior high school to cost $30,000 will be erected at Bear River.

—Portsmouth, Ohio. During the year 1927 three new schools will be erected; the largest will be the Woodrow Wilson School, which will accommodate one thousand pupils. The building of these schools has been made possible through the sale of bonds voted in the fall of 1925.

—Cleveland, Ohio. The board has been asked to approve the plans for the new John Hay School. The plans, which were prepared by Architect G. M. Hopkinson, provide for a three-story building, to accommodate 1,800 pupils.

—Chanute, Kans., recently voted on a special bond election to obtain some necessary school improvements.

—Indianapolis, Ind. More than $1,031,000 have been expended by the board of education on new building projects since July, 1925, according to a financial statement prepared by Mr. F. L. Reissner, secretary of the board. This included nine grade schools and three high-school buildings.

A rather ambitious program has been adopted for the year 1927, which calls for the expenditure of $2,475,000. Of this amount, $1,200,000 will be used for the Shortridge High School, $450,000 for three new grade schools, and $700,000 for new buildings at the Arsenal Technical High School.

—Tampa, Fla. A total of seven schools were occupied during the year 1926, and thirteen additional buildings are under construction, according to Supt. W. D. F. Snipes. The 1927 building program will call for an expenditure of $2,115,258. At the head of the list of new schools now under way is the H. B. Plant Senior High School, which will be erected at a cost of $384,500.

—The Bureau of Construction and Maintenance of the New York City board of education has been accused of laxity in submitting plans for new schools, in a letter to the board of education signed by Mr. Joseph V. McKee, president of the board of aldermen. Mr. McKee points out that $20,000,000 had been set aside by the city administration for immediate use, and that only $9,359,000 in contracts have been awarded. He further points out that though the building bureau eventually approved and submitted plans for the entire program, it was done so late that the total construction for 1926 was far below what it might have been. The charges have been denied through the superintendent of schools.

—Duluth, Minn. During the year 1926 a building program of more than $2,500,000 was completed, giving the schools additional classroom space. During the year 1927, the board of education plans a number of additions, work having been started on a $150,000 building for the Chester Park District. Another addition will be erected to cost $95,000.

—Toledo, Ohio. Building operations, involving an expenditure of approximately $2,500,000, will be undertaken by the board of education in 1927. Two new schools, to accommodate 2,000 students each, will be completed in September, 1928.

—Canton, Ohio. A building program involving the erection of four high schools and two grade schools was carried out during the year 1926. Of the high schools, one has been completed and occupied and the other three will be completed and in use by September, 1927.

—Wilmington, Del. Steps have been taken for the erection of the Howard High School, at an estimated cost of $660,000.

—Knoxville, Tenn. The board of education has adopted plans for its 1927 school building program. The board has a fund of $800,000 available for building purposes.

—New York, N. Y. The city board of estimates has been asked to approve the plans for the new DeWitt Clinton High School. The school will accommodate 5,124 students and will cost approximately $3,700,000.

—Cleveland, Ohio. The board of education has asked the Common Pleas Court for permission to transfer $1,000,000 from the general fund to the building fund, in order to speed the erection of new buildings and complete needed construction work already in hand.

—Houston, Tex. The board of education is rapidly completing the building program begun during 1926. Since January 1, 1926, contracts have been awarded for $1,650,000 for elementary schools alone. Added to this is approximately $500,000 for the completion of high schools begun prior to that time. Approximately one and one-quarter million dollars remain for buildings and equipment for elementary schools. This program involves fifteen new buildings, nine additions to present school buildings, and eight rehabilitation projects. The present contracts provide for 200 classrooms for elementary schools, of which 33 have been completed and occupied, and fifty will be completed within thirty days.

—The M. S. Hershey Junior-Senior High School was erected by Mr. M. S. Hershey as a gift to the people of Derry township, Dauphin County, Pa. It was occupied during the 1925-26 school term, with an initial enrollment of 415 pupils. The building has a fine auditorium and is fully equipped for teaching woodwork, art, mechanical drawing, and music.

—The schools of Kent County, Maryland, are maintained at a cost of more than $150,000 per annum. A plan of consolidation has been put into operation, which calls for the elimination of all one- and two-room schools and the transportation of children to a central building.

—New York, N. Y. Plans for the DeWitt Clinton High School, the largest secondary school in the country, have been approved by the board of education. The school will accommodate 5,124 boys and girls and will cost $3,500,000. It will be completed in two or three years.

—Springfield, Ohio. A ten-room school will be erected in the near future. It is planned to use $125,000 of the surplus in the general fund to cover the cost of the site and the construction of the building.

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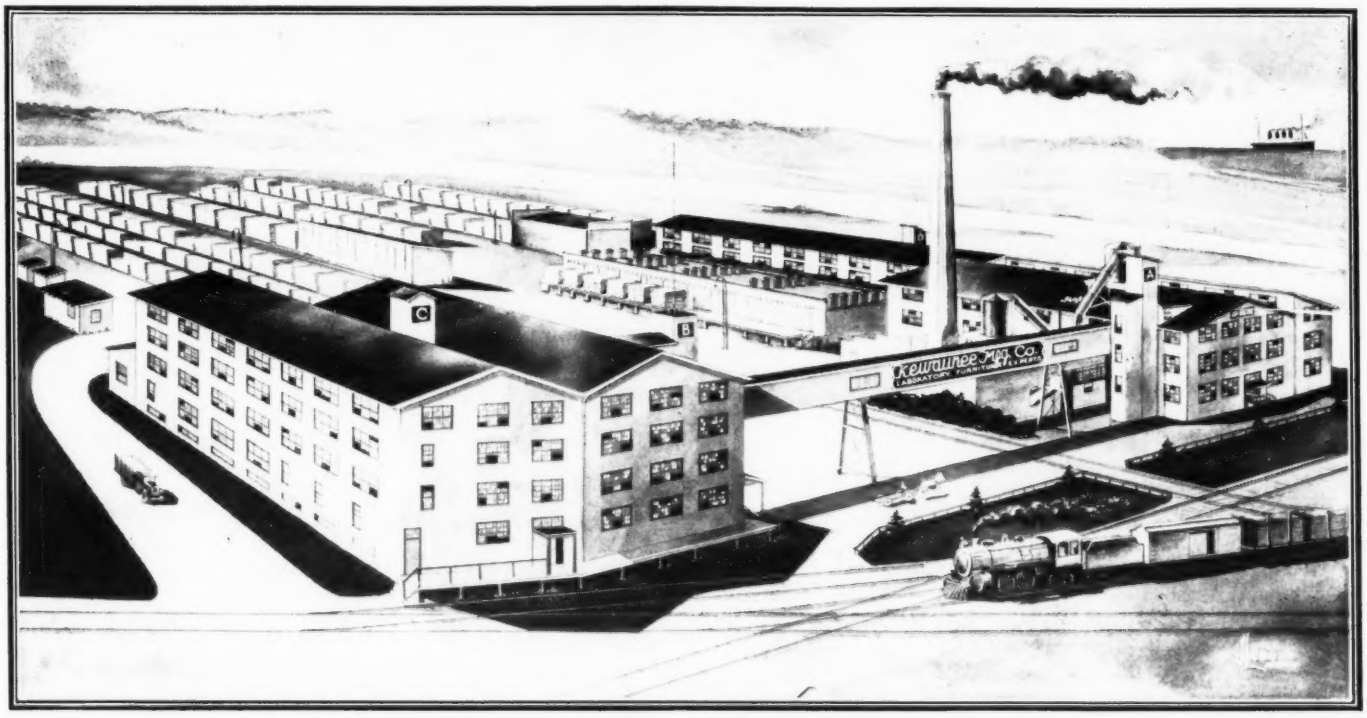

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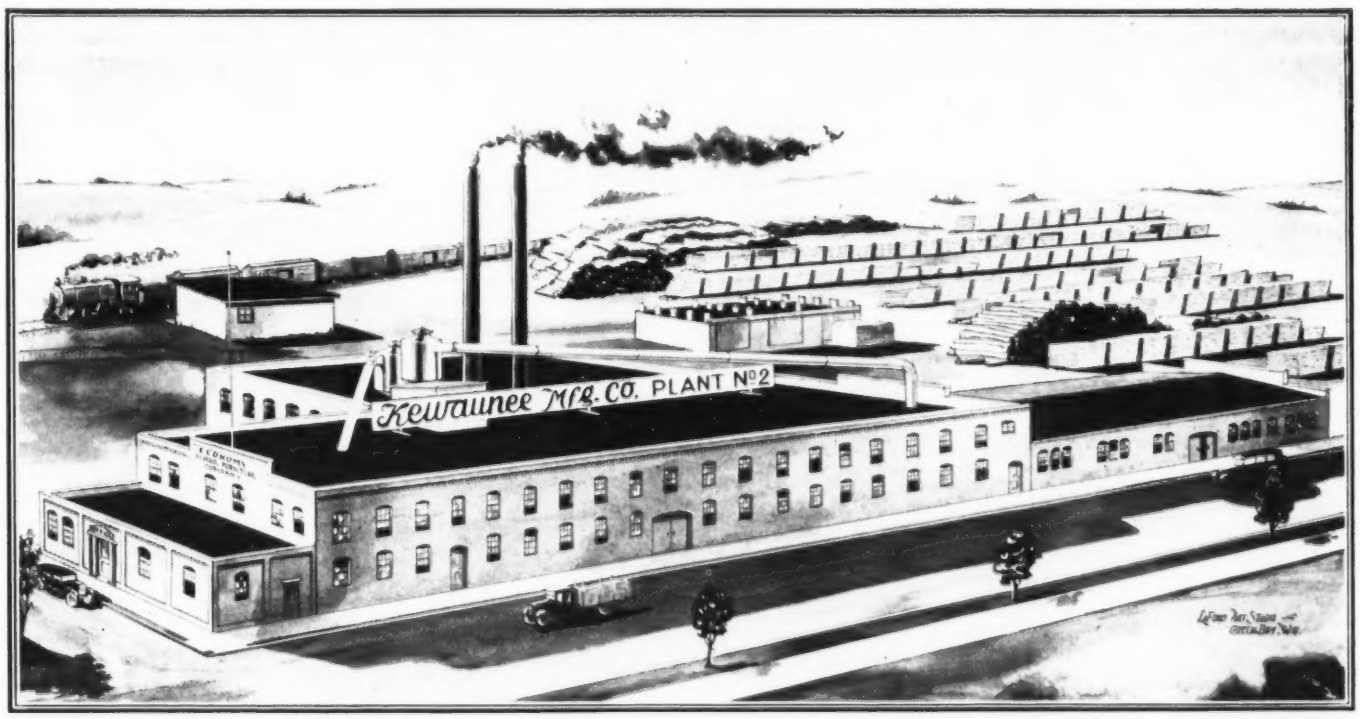

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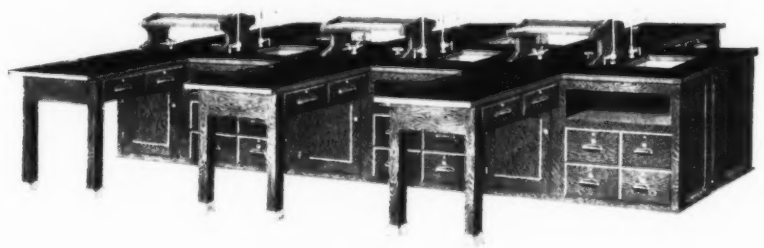

Science Desk No. 8030

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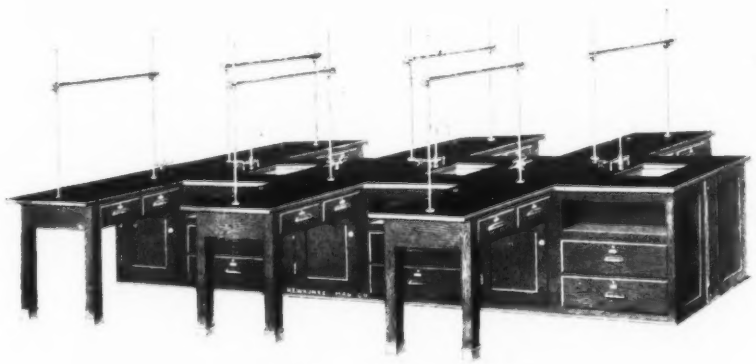

Science Desk No. 7045

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Data by Dr. Paul C. Packer, in "Housing of High School Programs," Bureau of Publications, Teachers College, Columbia University (1924).

Comparison of Actual Capacity and Available Attendance for Different Types of Work in Eight Cosmopolitan High Schools, Dec., 1919.

Type	Capacity	Attendance	Attendance in Percent of Capacity Capacity 100%
Chemistry Laboratory	4,350	1,787	Used 41% of time
Physics Laboratory	3,010	863	" 29% " "
Biology Laboratory	4,060	2,268	" 56% " "
Manual Training Department	4,826	2,324	" 48% " "
Art Department	2,584	1,395	" 54% " "
Sewing Department	3,284	1,650	" 50% " "
Cooking Department	1,752	1,022	" 58% " "

Kewaunee - Economy

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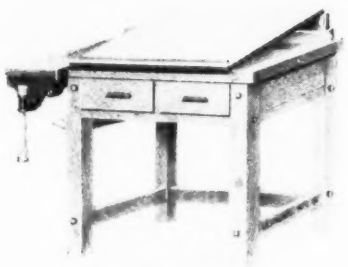

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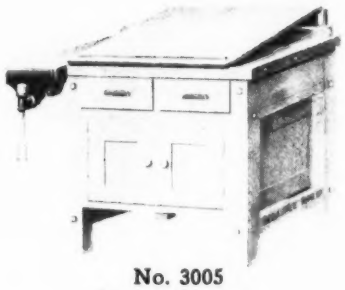
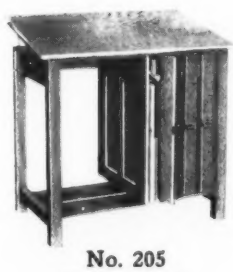


No. 3005
Manifold Desk

No. 3010
Manifold Desk

No. 3015
Manifold Desk



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The Detroit

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Kewaunee-Economy drawer construction is very sturdy. Drawer fronts have dust-proof overlap construction. Drawer bottoms are three-ply panels housed in fully.

Kewaunee-Economy tables, desks and cases are all stained, filled, and carefully varnished, and the last coat rubbed to a dull, smooth finish. Our standard finish, which is Light Golden Oak, will be furnished unless otherwise called for, but our finishing department is prepared to match any finish or if desired, we can offer samples showing a wide range of choice.

We manufacture equipment of all types to architects' specifications and drawings.

Kewaunee-Economy equipment is fully guaranteed against defects in material or workmanship, and any Kewaunee-Economy equipment proving defective will be promptly replaced without cost.

Write for Catalog No. 8.

Kewaunee Mfg. Co.,

Designers and Manufacturers of
Art and Mechanical Drawing Room
Furniture for Schools and Colleges

Economy Plant No. 2
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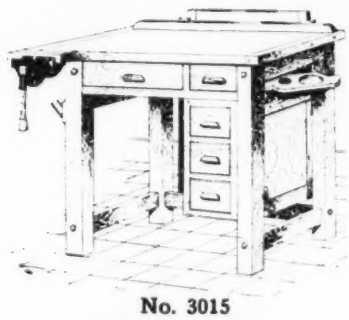
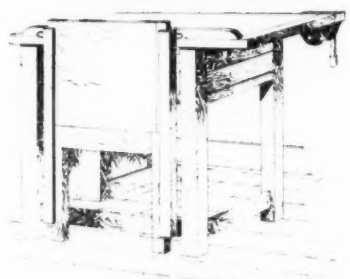


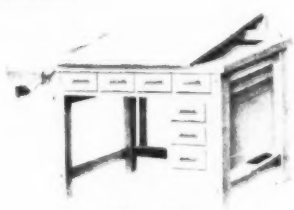
No. 3015
Manifold Desk
Board Lowered Position



No. 3015
Manifold Desk
Rear View, Board Lowered

No. 3030
Manifold Desk

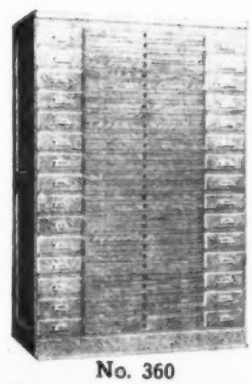
No. 3020
Manifold Desk



No. 3025
Manifold Desk

No. 355
Sectional Blueprint and
Storage File

No. 410
The Long Island



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Tool and Board Cabinet

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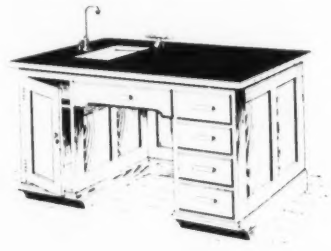

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(on right)
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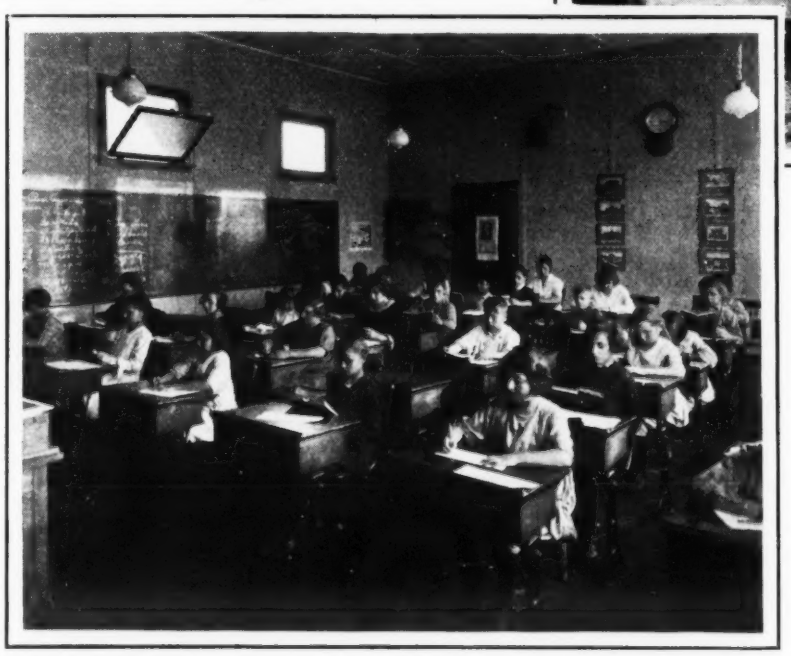

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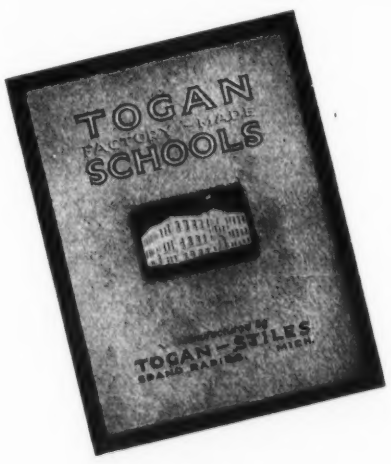

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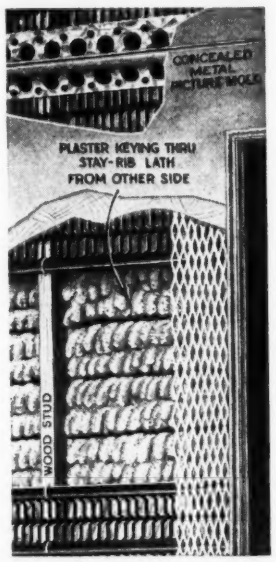

Milcor "Expansion" Casing (Patented June 12, 1922 and January 26, 1926). This metal trim, shown here in position in a wall plastered on Milcor Stay-Rib metal lath, eliminates costly wooden casings for doors and windows, blackboards, etc., improves the appearance of rooms, makes them more sanitary, easier to keep clean — and actually saves money.

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FOR BUSY SUPERINTENDENTS

SALARIES OF MASSACHUSETTS SUPERINTENDENTS

Publication by the State Department of Education in Massachusetts of the salaries of superintendents and assistant superintendents for October, 1926, shows for the 216 persons listed, a salary range of from $2,350 to $12,000. The median salary is $4,100, while the average salary is $4,104.56. Twenty-one persons receive $4,000; seventeen are paid $4,500; fourteen receive $3,500, and the same number are paid $3,000. The distribution is shown in the following table:

Salaries of Massachusetts Superintendents and Assistant Superintendents
October, 1926

$12,000	1	$5,100	4	$3,900	1	$3,100	6
10,000	1	5,000	7	3,800	2	3,000	14
9,000	1	4,800	2	3,700	6	2,905	1
8,000	1	4,750	2	3,650	1	2,900	3
7,700	1	4,700	1	3,600	10	2,850	1
7,500	1	4,600	1	3,550	1	2,800	5
7,000	11	4,500	17	3,500	14	2,700	6
6,500	2	4,400	1	3,450	1	2,600	3
6,250	1	4,300	2	3,400	6	2,500	10
6,000	4	4,250	1	3,300	11	2,400	2
5,500	6	4,220	1	3,260	1	2,350	1
5,400	1	4,200	3	3,250	1		
5,250	1	4,100	4	3,200	7		
5,200	2	4,000	21	3,150	1		

Comparison of this list, with a similar list for October, 1925, shows some interesting facts. Eighty-eight places have increased salaries in the last year. Eighty-two of these have increased salaries without change in superintendents, these increases ranging from $50 in one case, to $1,500 in two instances. Twenty-two persons were raised $200 each, while twenty-one had increases of $100. The list follows:

Increases 1926 Over 1925
Eighty-two with same superintendent

Amount	No.	Amount	No.	Amount	No.
$1,500	2	$500	8	$220	1
1,000	4	400	3	200	22
750	1	300	7	150	3
600	2	260	1	100	21
550	1	250	5	50	1

In six places the increases were given to new men in the positions. Two places paid $800 more than to the former superintendent, although in one of these, the new man was both superintendent and high-school principal so that the increase was not for the superintendency alone. One union district of these towns paid the new man $700 more than was given his predecessor. A two-town district paid $500 more. One town paid $200 more, and another district increased the salary by $100.

Increases 1926 Over 1925
Six with change in superintendents

Amount	No.
$800	2
700	1
500	1
200	1
100	1

In 115 places where there was no change in superintendents there were no change in salary.

There were seven places where a change in superintendents was accompanied by a decrease in salary. One town paid $700 less, another $600 less. A district paid $500 less to the new superintendent but since the district was decreased by one town, possibly this should not be called a real reduction. One town paid $300 less; another $200 less, while one district paid $100 less, as did one city for a new assistant superintendent.

In only one case was there a change in superintendents without a change in salary.

Of the 197 places where there was no change in position 41.6 per cent gave salary increases, while 58.4 per cent made no change in compensation to the superintendent.

A study of the places which increased salaries offers substantial encouragement to Massachusetts superintendents. One of the places increased the salary by $1,500 for a man who had held the position for some twenty years. Such recognition of service is especially noteworthy in view of the practice of some places in keeping a good man for years on a prewar salary basis only to pay his successor a large increase. The same may be said for three of the cities which added a thousand dollars to the pay of their superintendent. This together with the fact that 82 places increased the salary paid superintendents without change in the official, is evidence that there was a widespread tendency during the last year to salary increases in Massachusetts.

NEW STATE SUPERINTENDENT

(See Page 40)

Mr. Charles W. Taylor, formerly professor of school administration in the Teachers' College of the University of Nebraska, has been elected State Superintendent of Public Instruction.

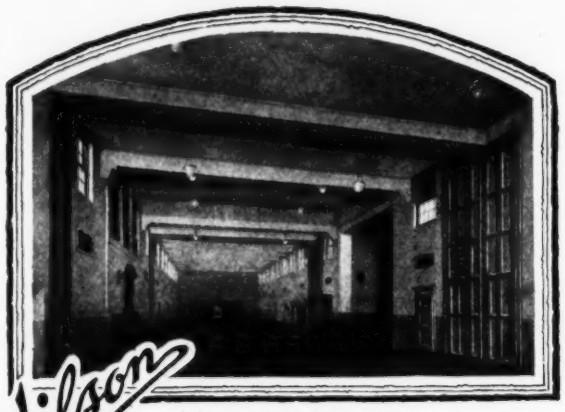
Mr. Taylor received his elementary education in the rural schools of Montgomery County, Iowa, graduating from the Red Oak high school in 1893, and from the University of Nebraska in 1894. He did some graduate work in Nebraska educational institutions and taught school in Iowa during three terms. In September, 1898, he was elected superintendent of schools at Ohiowa, Nebr., and in January, 1900, he went to Geneva, where he remained until August, 1907. In June, 1908, he was elected superintendent of schools at McCook, which position he held until appointed principal of the Teachers' College high school and professor of school administration in the Teachers' College of Nebraska University in September, 1911.

Mr. Taylor is a man of high moral, social, religious, and ethical ideals, and his professional standing in the field of education is unquestioned. In constructive school legislation, he has played an important part. He was prominent in three great pieces of legislation passed by the 1907 legislature and is considered the right man to act as head of the state school system.

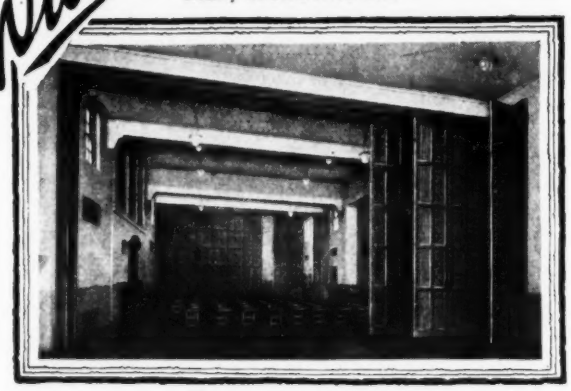
AMONG SUPERINTENDENTS

—The term of Dr. J. O. Engelman as superintendent of the Terre Haute, Indiana, schools expires next August. The "Post" of that city believes that the question of his retention should be considered now. It believes that the school board should say to him: "You have made a good and efficient superintendent. We would like to renew your contract."

—The new principals appointed for Chicago schools by Superintendent William McAndrew and approved by the board of education are: Roy F. West, Moose school; Mary L. Patrick, Armour school; Gertrude F. Jaynes, Ebinger school; Anna P. Keller, Tennyson school; Harold W. Kent, Prussing school; Ella F. Flynn, Locke school.



Many rooms into one



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—Supt. M. R. Keyworth of Hamtramck, Mich., has been given a doctor's degree by the University of Michigan.

—C. H. Davis, 84, a former superintendent of schools at Alliance, Ohio, died at his home following a brief illness. He was a member of the board of trustees of Ohio University at the time of his death.

—Mr. Ernest L. Thurston, formerly superintendent of schools at Washington, D. C., has recently become editor of the Iroquois Publishing Company, with headquarters at Syracuse, N. Y. Mr. Thurston brings to his new work an educational equipment obtained through an intimate working knowledge of the fields of education. He enjoys a wide literary experience covering the writing and editing of textbooks and has done considerable writing for various periodicals in the fields of education, child welfare, and nature study.

Mr. Thurston is the author of several books on arithmetic, a series of articles on arithmetic teaching, and is editor of several texts on business subjects and higher mathematics.

—Mr. Frank W. Hubbard, formerly director of research at Fresno, Calif., has been appointed as assistant director of research at Washington, D. C. Mr. O. S. Hubbard, formerly superintendent of schools at Madera, Calif., has been appointed to succeed Mr. Hubbard at Fresno.

—Supt. L. R. Fultz, of Forest, Ohio, is under $1,000 bond for the Hardin County grand jury, on charges of striking and assaulting two students in the school. Charges against the instructor were filed by the parents of the students. The defense contended that the students were aware of the rule forbidding the wearing of caps in the school buildings, and that the instructor was within his rights in administering punishment.

—Supt. J. L. Foust, of Owensboro, Ky., has been elected president of the superintendents' department of the Kentucky Educational Association. Mr. Foust succeeds Miss Mattie Dalton. Other officers elected were Mr. N. O. Kimbler and Mr. R. G. Hill, vice-presidents, and Mr. P. H. Hopkins, secretary-treasurer.

—Mr. William F. Vogel, director of the teachers' training and licensing divisions of the state education department of Indiana, has been elected superintendent of schools at Shelbyville. Mr. Vogel succeeds Mr. Alvin C. Kibbey, whose death occurred some time ago.

—Supt. C. S. Meek of Toledo, Ohio, has been elected president of the Ohio Teachers' Association.

—Dr. Joseph S. Taylor, of New York City, on January 4 was guest of honor at a luncheon given by the principal and teachers of Public School No. 38 in honor of his fifty years of service. Dr. Taylor is retiring from educational work after serving for twenty-five years as a district superintendent.

DR. J. O. ENGLEMAN,

who has been ousted as superintendent of schools of Terre Haute, Ind. For a year or more a controversy as to the exercise of authority raged between the superintendent and the board members. Dr. Engleman's high standing as an educational leader has been generally acknowledged, and if the citizens of Terre Haute were asked just why their school superintendent was dismissed, they would be unable to answer the question. It is said, however, that a secret organization had decreed Engleman's decapitation.

—Supt. C. Ray Gates, of Grand Island, Nebr., has been given a three-year contract, and his salary fixed at $5,500, $5,500, and $6,000, respectively. Mr. Gates has completed five years of service at Grand Island.

—Supt. J. N. Pierce, of Green County, Tenn., has resigned after fourteen years of service. Mr. George W. Hardin, of Johnson City, has been appointed to succeed Mr. Pierce.

—Mr. Henry W. Foster, superintendent of schools at South Orange, N. J., will retire in September next, under the state pension provision. Mr. John H. Bosshart, principal of the high school, will succeed Mr. Foster.

—Supt. Isaac O. Winslow nominated Charles E. Paine as vice-principal of the classical high school and T. Franklin Walsh as vice-principal of the commercial high school of Providence, R. I. The nominations were confirmed by the board of education, which body holds to the principle of recognizing deserved promotion. Mr. Winslow himself rose to his present position from the teaching ranks, being named superintendent in 1913 after serving as assistant superintendent and principal of the Thayer Street School.

—The office of superintendent at Quincy, Mass., made vacant by the death of Fred H. Nickerson, October, 1926, was not filled by January 1, 1927. It was charged by Mayor Barbour that the religious question had entered into the selection of a superintendent and had caused the delay. The members of the school committee deny the charge.

—James J. Murray, principal of the Phillips school at Salem, Mass., who was accused by Miss Agnes E. Callahan, a school nurse, of writing poison letters, was upon investigation exonerated by the school board. The board also extended a vote of confidence to Principal Murray.

—District superintendents of schools in New York State will meet early next year at a number of sectional conferences. The conferences will be held in five cities—at Albany, January 24 and 25; at Potsdam, January 27 and 28; at Syracuse, February 1 and 2; at Buffalo, February 3 and 4; and at New York, February 9 and 10. Speakers at the conferences will comprise Dr. J. C. Morrison, Dr. M. G. Nelson, Dr. Clyde B. Moore, and Dr. Jacob S. Orleans.

Peterson Furniture *for* Laboratory and Library

Will be on Display at the 1927 Convention of the Department of Superintendence of the N. E. A., Dallas, Texas, February 26th to March 3rd.

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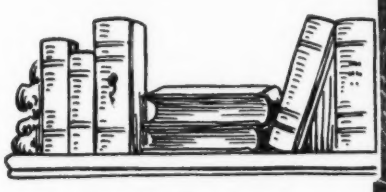

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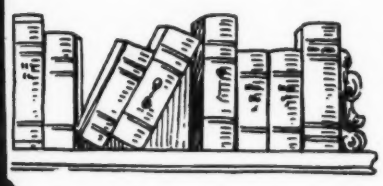

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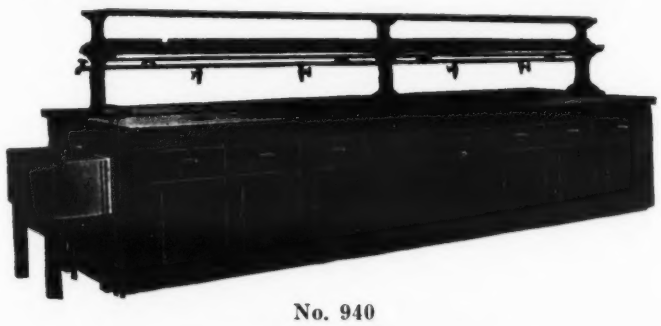

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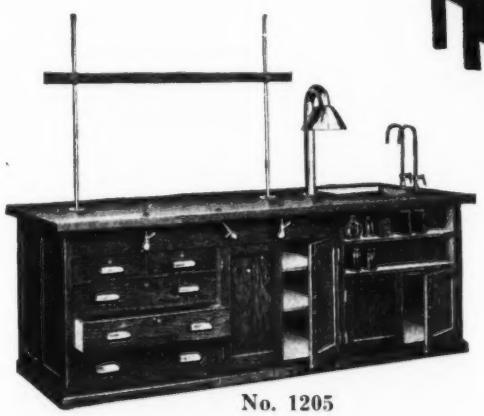

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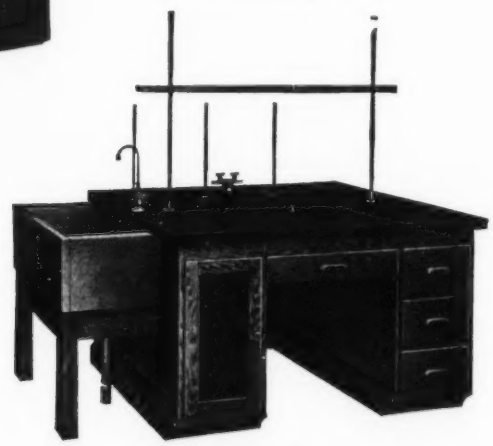

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The 1927 School Building Forecast

In the building projects carried on from year to year throughout the United States the schools always have, and always will, play an important part. In fact, so far as the several types of structures are concerned, being nineteen in number according to experts, schools hold a place near the top of the list. The projects are classified into the several structures employed for financial, commercial, and industrial enterprise, and those used for other purposes.

Some idea of just how largely schoolhouses figure in the total construction operations of the country may be gained from the proportion to the whole which the several types of structures hold in an analysis. The enumeration as applied to 1926 divides itself as follows: Automotive, 2.7; banks, 3.3; apartments, 10.8; apartment hotels, 3.4; clubs, 4.6; community and memorial, 2.7; churches, 5.1; dwellings (3 types), 7.9; hotels, 10.5; hospitals, 5.5; industrial, 8.7; office buildings, 11.9; public buildings, 4; schools, 12.4; stores, 2.2; theaters, 3.1; welfare, 1.2.

From this enumeration, which proceeds from the basis of 100 per cent, and the relation that each type bears to the total, it will be seen that the school buildings lead with a total of 12.4 per cent. This per cent, of course, varies as far as the several divisions of the country are concerned. Here it is noted that in the northeastern states the school buildings rise to 15.3 per cent of the whole. In the other divisions they run as follows: North Atlantic states, 12.51; southeastern states, 6.9; southern states, 10.7; middle states, 13.5; and western states, 10.5 per cent.

In arriving at the real figures for any one year it must be assumed that projects which are started in one year may lap over into the next. The bond issues engaged in afford a cue, the letting of contracts do likewise, and the cost entailed when the project is completed, affords another. The year may begin with incompleted contracts and may end with new projects equally incompleted. It would be difficult to arrive at a correct estimate of the value of the work actually completed within the range of a year's time. The data at command affords a reasonable criterion upon which to base estimates and conclusions that are acceptable and sound.

In summarizing the data at command it becomes evident that the momentum which the school building operations of the country gained a few years ago are not likely to relax much during the year 1927. While in the larger communities there is still an acute shortage in school seatings, the smaller communities are concerned with accommodations in anticipation of a constantly growing pupil constituency.

Another controlling factor which comes into play at this time is the replacement of old and inadequate buildings by modern structures. Then, again, the tendency of a shift in population owing to the growth of communities and the change in modes of traffic and transportation. The expansion of population centers tends towards new neighborhoods readily reached by automobile service. They must be supplied with new schoolhouses while commercial interests invade the older residence districts and render the schoolhouses therein less serviceable.

The schoolhouse contracts let during the past several years have been as follows:

1920	$172,298,000
1921	243,833,000
1922	303,346,000
1923	272,530,000
1924	367,438,000
1925	423,203,700
1926	381,098,200

From this table it will be noted that 1925 was the peak year and that the year 1926 shows a lowering tendency. In reaching an estimate for 1927 we find the schoolhouse projects now under construction to amount to $244,775,096, and the new projects proposed amount to $179,848,776.

In arriving at these figures it should be said that they are based on returns made by 1,475 towns out of 2,867 towns having a population of 2,500 and over. The unreported towns constitute about 49 per cent of the whole. On the assumption that the ratio of the recorded projects may reasonably apply to the unrecorded projects, the total would reach the sum of $267,974,676. In the past it has been found that the building operations in rural districts, not included in the towns, constitute about 10 per cent of the total operations, thus raising the figure already named to $260,654,422.

In attempting a forecast early in the year it must be assumed that new projects in contemplation are yet to find expression in definite announcements. At the spring elections many bond issues, large and small, are to be voted.

In view of the facts now in hand, namely, the volume of school buildings in course of construction, and the new projects that have thus far been announced, the conjecture must be that the operations for 1927 will come somewhere near the 1926 figure which was $381,098,200.

SCHOOL BUILDING PROGRAMS IN 1,476 CITIES (2,500 POPULATION AND UPWARD)

State	Buildings Under Construction	Buildings Proposed
Alabama	$ 395,000.00	$ 350,000.00
Arizona	10,000.00	.....
Arkansas	940,000.00	105,000.00
California	19,220,400.00	12,635,000.00
Colorado	1,830,000.00	1,020,000.00
Connecticut	5,888,900.00	3,375,000.00
Delaware	860,000.00	500,000.00
District of Columbia	1,950,000.00	2,515,000.00
Florida	5,151,980.00	4,356,000.00
Georgia	287,000.00	794,000.00
Idaho	.....	441,000.00
Illinois	13,531,500.00	14,600,000.00
Indiana	10,952,500.00	3,496,500.00
Iowa	1,725,000.00	501,000.00
Kansas	1,885,950.00	1,625,000.00
Kentucky	1,929,348.00	3,180,000.00
Louisiana	2,980,000.00	2,184,000.00
Maryland	2,065,000.00	1,460,000.00
Massachusetts	7,027,010.00	6,929,500.00
Michigan	7,744,920.00	4,655,000.00
Minnesota	1,894,315.62	1,530,000.00
Mississippi	297,000.00	518,000.00
Missouri	14,999,738.15	3,815,000.00
Montana	.....	536,000.00
Nebraska	3,443,923.26	528,000.00
Nevada	95,000.00	10,000.00
New Hampshire	580,896.00	.....
New Jersey	19,067,225.30	9,680,000.00
New Mexico	1,205,128.00	25,000.00
New York	37,553,353.00	31,931,200.00
North Carolina	3,310,000.00	2,490,000.00
North Dakota	260,000.00	4,000.00
Ohio	14,953,420.61	12,872,576.00
Oklahoma	2,652,500.00	2,305,000.00
Oregon	1,671,056.00	2,131,000.00
Pennsylvania	29,935,674.00	28,002,000.00
Rhode Island	6,550,000.00	2,410,000.00
South Carolina	1,835,000.00	72,000.00
South Dakota	434,000.00	275,000.00
Tennessee	472,500.00	840,000.00
Texas	3,995,000.00	2,685,000.00
Utah	1,235,000.00	550,000.00
Vermont	465,000.00	650,000.00
Virginia	1,739,859.00	1,520,000.00
Washington	3,071,000.00	3,300,000.00
West Virginia	1,620,000.00	180,000.00
Wisconsin	5,012,000.00	6,267,000.00
Wyoming	52,000.00	.....
	$244,775,096.94	$179,848,776.00

SCHOOL BUILDING CONSTRUCTION STATISTICS

Contracts Let—Square Feet

Month	1921 (Covering 27 States)	1922	1923	1924 (Covering 36 States)	1925	1926
January	1,257,000	2,001,000	2,153,000	3,113,700	2,371,300	2,245,200
February	1,625,000	2,325,000	3,992,000	5,839,400	3,809,200	3,114,200
March	2,969,000	5,071,000	4,092,000	5,747,500	5,556,700	4,000,100
April	3,328,000	7,277,000	5,849,000	5,757,000	5,202,700	5,094,500
May	4,668,000	6,161,000	3,949,000	6,907,800	4,622,600	6,610,500
June	3,731,000	8,132,000	3,717,000	5,262,200	9,001,800	6,015,600
July	4,369,000	6,901,000	4,131,000	6,149,500	7,644,500	6,067,900
August	4,457,000	5,228,000	3,285,000	4,401,200	5,246,200	5,469,000
September	4,238,000	3,644,000	2,364,000	4,857,300	4,744,100	4,865,100
October	3,228,000	3,343,000	3,907,000	4,126,500	3,936,800	3,516,600
November	3,416,000	2,180,000	3,529,000	2,824,700	3,156,700	4,711,500
December	3,297,000	2,330,000	3,464,000	3,253,800	3,407,400	2,854,500
	40,583,000	54,593,000	44,432,000	58,240,600	58,799,900	54,564,700

Dodge Figures.

Contracts Let—Value

January	6,905,000	12,067,000	13,906,000	18,518,800	15,338,600	13,346,200
February	8,647,000	13,110,000	22,108,000	31,154,900	20,278,000	20,721,500
March	19,031,000	25,575,000	22,550,000	34,062,300	42,192,900	29,079,700
April	22,640,000	36,719,000	35,822,000	33,521,500	33,154,600	38,480,200
May	24,462,000	32,925,000	24,346,000	40,582,200	29,312,700	39,709,700
June	23,441,000	44,245,000	22,676,000	34,806,500	64,584,800	40,753,400
July	28,602,000	40,690,000	27,512,000	39,510,600	57,572,600	42,015,800
August	27,959,000	32,055,000	21,036,000	31,771,100	33,667,200	42,124,000
September	26,459,000	21,214,000	13,461,000	31,728,000	35,217,300	34,531,600
October	22,429,000	17,437,000	21,923,000	27,675,400	28,192,000	23,566,700
November	18,212,000	13,058,000	21,722,000	18,311,000	22,048,100	34,571,800
December	15,046,000	14,251,000	25,468,000	25,796,600	31,645,500	22,147,600
	243,833,000	303,346,000	272,530,000	367,438,900	423,203,700	381,098,200

Dodge Figures.

SCHOOL BUILDING OPERATIONS IN 60 OF THE LARGEST CITIES

City	Buildings Under Construction	Buildings Proposed
New York City, N. Y.	$ 17,779,852.00	$ 21,068,800.00
Chicago, Ill.	9,150,000.00	13,000,000.00
Philadelphia, Pa.	15,220,674.00	17,100,000.00
Detroit, Mich.	5,216,000.00	7,123,000.00
Cleveland, Ohio	3,020,134.00	3,000,000.00
St. Louis, Mo.	3,445,991.15	3,190,000.00
Boston, Mass.	1,000,000.00	3,000,000.00
Baltimore, Md.	1,900,000.00	1,400,000.00
Pittsburgh, Pa.	4,050,000.00	2,400,000.00
Los Angeles, Calif.	5,324,000.00	3,971,000.00
Buffalo, N. Y.	.....	1,000,000.00
San Francisco, Calif.	4,580,000.00	1,450,000.00
Milwaukee, Wis.	1,458,000.00	1,100,000.00
Washington, D. C.	1,950,000.00	2,515,000.00
Newark, N. J.	1,473,540.00	1,420,000.00
Cincinnati, Ohio	1,278,286.61	1,131,576.00
New Orleans, La.	725,000.00	1,100,000.00
Minneapolis, Minn.	958,080.00	1,270,000.00
Kansas City, Mo.	5,284,123.00	.....
Seattle, Wash.	2,010,000.00	2,500,000.00
Indianapolis, Ind.	710,000.00	1,550,000.00
Rochester, N. Y.	844,915.00	2,550,000.00
Portland, Ore.	680,056.00	1,861,000.00
Denver, Colo.	.....	845,000.00
Toledo, Ohio	400,000.00	2,000,000.00
Providence, R. I.	2,700,000.00	2,000,000.00
Columbus, Ohio	900,000.00	1,570,000.00
Louisville, Ky.	728,348.00	2,500,000.00
St. Paul, Minn.	.....	360,000.00
Oakland, Calif.	2,041,000.00	2,763,000.00
Akron, Ohio	600,000.00	300,000.00
Atlanta, Ga.	.....	560,000.00
Omaha, Nebr.	1,379,923.26	.....
Worcester, Mass.	500,000.00	500,000.00
Syracuse, N. Y.	2,650,000.00	1,300,000.00
New Haven, Conn.	1,400,000.00	.....
San Antonio, Tex.	.....	400,000.00
Dayton, Ohio	2,445,000.00	1,210,000.00
Bridgeport, Conn.	700,000.00	800,000.00
Houston, Tex	1,535,000.00	1,200,000.00
Hartford, Conn.	450,000.00	.....
Scranton, Pa.	500,000.00	1,825,000.00
Grand Rapids, Mich.	300,000.00	.....
Paterson, N. J.	1,500,000.00	700,000.00
New Bedford, Mass.	650,000.00	1,200,000.00
Fall River, Mass.	.....	360,000.00
Salt Lake City, Utah	275,000.00	275,000.00
Camden, N. J.	300,000.00	.....
Norfolk, Va.	294,859.00	.....
Albany, N. Y.	1,500,000.00	.....
Wilmington, Del.	860,000.00	500,000.00
Spokane, Wash.	180,000.00	245,000.00
Kansas City, Kans.	275,000.00	175,000.00
Duluth, Minn.	726,315.62	.....
Elizabeth, N. J.	.....	1,030,000.00
Erie, Pa.	950,000.00	1,475,000.00
Flint, Mich.	750,000.00	875,000.00
Jacksonville, Fla.	2,259,980.00	.....
Oklahoma City, Okla.	125,000.00	110,000.00
Schenectady, N. Y.	125,000.00	1,000,000.00
	$118,059,077.64	$122,778,376.00

This table deals with the larger cities only. Here it is shown that the work now in course of construction amounts to $118,059,077, and the new projects in hand amount to $122,778,376. The two aggregate a total of $240,837,453.

SCHOOL BUILDING PROGRAMS

(Concluded from January)

City	Buildings Under Construction	Buildings Proposed
Blytheville	.....	$ 25,000
CALIFORNIA		
Berkeley	$ 250,000	.....
FLORIDA		
St. Augustine	.....	250,000
ILLINOIS		
Pinckneyville	100,000	.....
INDIANA		
New Albany	450,000	.....
KANSAS		
Emporia	1,035,000	80,000
MASSACHUSETTS		
Fall River	.....	360,000
Lexington	.....	150,000
WASHINGTON		
Centralia	.....	52,000
Spokane	180,000	245,000
VERMONT		
St. Albans	.....	300,000

IMPORTANT SCHOOL BOND SALES OF THE PAST MONTH

(December to January)

CALIFORNIA—Los Angeles Co., Beverly Hills Schl. Dist., Mark Keppel, Supt., Los Angeles, Calif. $ 280,000

CALIFORNIA—Los Angeles Co., Los Angeles City Sch. Dist., Mark Keppel, Supt., Los Angeles, Calif. 1,000,000

CALIFORNIA—Los Angeles Co., Los Angeles City High Sch. Dist., Mark Keppel, Supt., Los Angeles, Calif. 1,000,000

CALIFORNIA—Riverside Co., Riverside City High Sch. Dist., Ira C. Landis, Supt., Riverside, Calif. 850,000

CALIFORNIA—San Luis Obispo Co., San Luis Obispo Sch. Dist., Robt. L. Bird, Supt., San Luis Obispo, Calif. 250,000

CONNECTICUT—Hartford, High School, F. D. Wish, Jr., Supt. 437,000

FLORIDA—Lee Co., Spec. Tax Sch. Dist., No. 1, J. C. English, Supt., Ft. Myers, Fla. 640,000

MASSACHUSETTS—Gardner, School, F. T. Reynolds, Supt. 325,000

MICHIGAN—Flint, Union Sch. Dist., C. V. Courtier, Supt. 650,000

MISSOURI—Joplin, Sch. Dist., Jas. A. Koontz, Supt. 375,000

NEW JERSEY—Cliffside Park, Sch. Dist., Geo. F. Hall, Supt., Grantwood, P. O., Cliffside Park, N. J. 320,000

NEW JERSEY—East Orange, School, Series "LL," C. J. Scott, Supt. 343,000

NEW JERSEY—Irvington School, Robert L. Saunders, Supt. 921,000

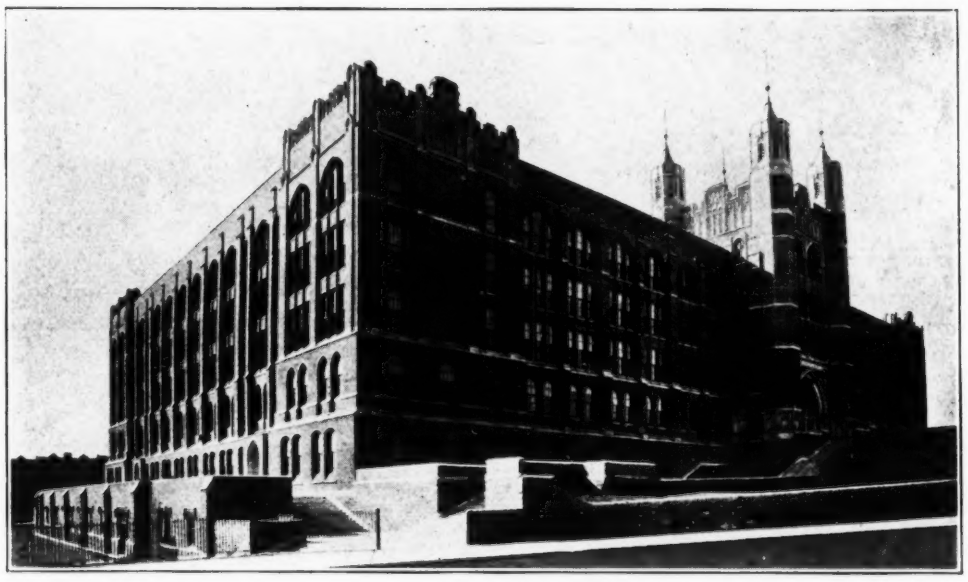
NEW JERSEY—South Orange and Maplewood, Sch. Dist. 1,173,000

NEW YORK—New Rochelle, School, Albert Leonard, Supt. 693,000

NEW YORK—Rochester, School Revenue, H. S. West, Supt. 750,000

NORTH CAROLINA—Asheville, Schl. Bldg., W. Brooker, Supt. 1,500,000

DURABILT STEEL LOCKERS



Overbrook Senior High School,

The Pride of Philadelphia

The Overbrook Senior High School of Philadelphia is one of the finest in the country; the English Gothic architecture making it a most impressive structure.

This building has been designed to accommodate approximately 3800 pupils and represents the last word in modern educational equipment. In addition to many commodious class rooms, the Overbrook has numerous groups of laboratories, work shops, domestic science suites, gymnasiums, and locker rooms.

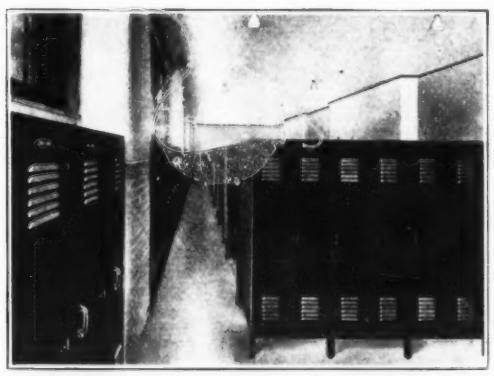
A policy of true economy guided the Philadelphia Board of Education in their deliberations and final selection of Durabilt Steel Lockers for this school. They were fully convinced that Durabilt features of construction and finish insure continuous locker service and satisfaction.

Successive years of hardest use and abuse will prove that no other lockers, irrespective of price, could have added more to the service, security, and durability of this fine building.

Durabilt Steel Lockers are supplied, year after year, for the nation's leading schools because they are substantial, long-lived, economical, and entirely satisfactory.

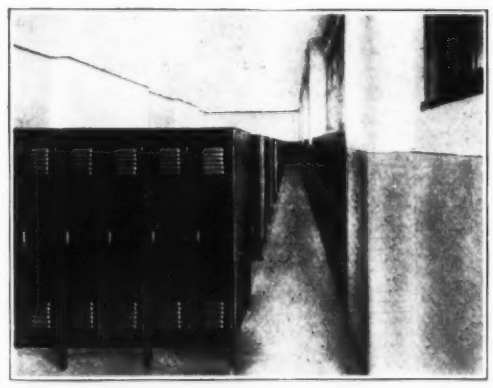
Only such high standards of Quality and Service can leave favorable impressions with discriminating buyers. Surely you too will be interested in learning more about Durabilt Steel Lockers.

Phone our nearest Sales Representative or write us at Aurora for a copy of the New Durabilt Handbook which tells the story of quality lockers.



Durabilt Steel Lockers are installed in eight large locker rooms, Overbrook Senior High School, Philadelphia, Pa.

These illustrations give but a faint idea of the locker accommodations in this building.



"No better built than Durabilt!"

Remember the Name — It Signifies Locker Satisfaction

DURABILT STEEL LOCKER CO.

400 ARNOLD AVE., Sales Offices In All Principal Cities AURORA, ILL.

AT THE N. E. A. CONVENTION

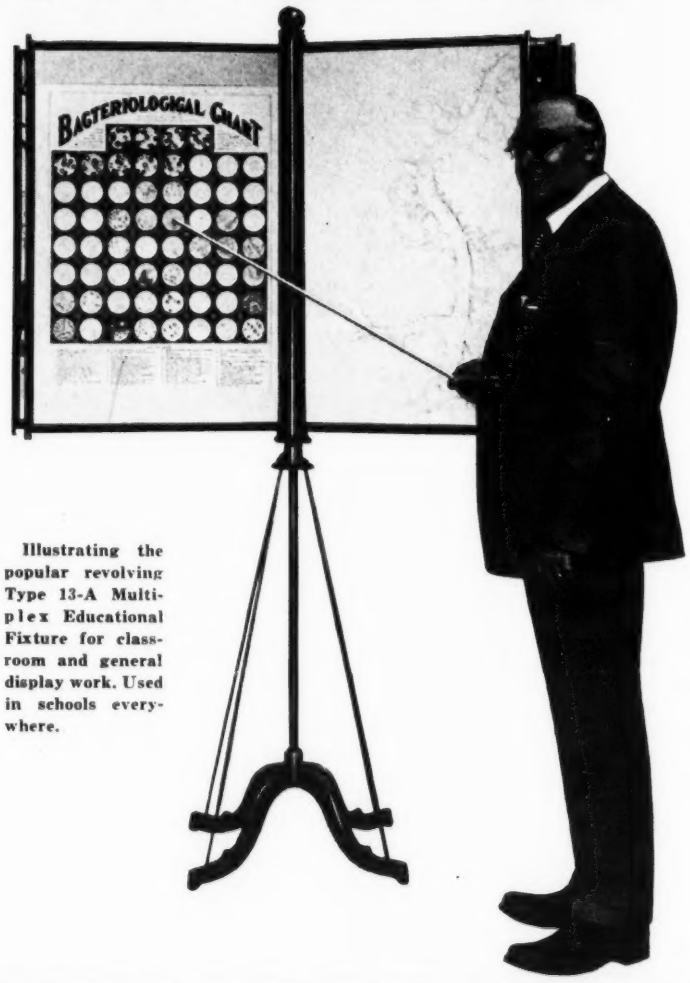
VISIT BOOTH 125

You will find here a method of increasing classroom efficiency. You will find how Multiplex can and does give valuable assistance to the visual method of education. You will find that Multiplex has an important place in all modernly and well equipped classrooms.

We believe your visit to Booth 125 will prove both interesting and valuable to you, and look forward to the pleasure of explaining to you the real importance of Multiplex in the educational institutions of today.

MULTIPLEX DISPLAY FIXTURE CO.

921 N. Tenth St., St. Louis, Mo.



Illustrating the popular revolving Type 13-A Multiplex Educational Fixture for classroom and general display work. Used in schools everywhere.

IMPROVING DETAILS IN PRESENT SCHOOL PLANTS

(Concluded from Page 64)

prevent careless management and unnecessary waste.

"13. In permanent buildings, wooden, nonfireproof stairs should be replaced with modern metal fireproof stairs. This should be looked after as a part of the fireproofing of those buildings which serve as permanent structures.

"14. Fire-fighting apparatus should be installed in every building. A better fire alarm system is needed in most buildings, something which differentiates it distinctly from the usual bell signals to which the children are accustomed. Except in fireproof structures, where there is but one entrance above the first floor, there should be outside access to a fire escape. Every basement room used by the children for any purpose should have two widely separated exits, one of them in nonfireproof buildings leading to the outside.

"15. Each permanent building—whether elementary, junior or senior high—should be supplied with master clock, secondary clocks, and an efficient signal system. Where intercommunicating telephones have been installed, they should be made to work.

"16. The playgrounds and athletic fields should be made excellent play spaces for children for every season of the year. They should be properly surfaced for use in practically all kinds of weather. Portions intended for specific games and sports should be properly laid out and equipped for those games and sports. There should be equipment appropriate to the ages of the pupils. Of course, all really dangerous apparatus should be avoided. The ground should be filled, graded, surfaced, and equipped for a generous abundance and variety of wholesome outdoor recreation.

"17. In the matter of improving sites, attention should be given to provision for pupil contacts with matters of grading, shrubbery, and landscape effects. Some of the grounds are large enough to provide excellent opportunities.

"18. In permanent buildings, for all types of schools, in basements, classrooms, library rooms, auditoriums, etc., overhead radiation as the sole method of heating should not be used.

"19. One of the matters involved in improving the permanent plant to which attention should be given is that of brightening, and making light and pleasing, every room in which teachers and children must work and live. In some of the buildings, a tasteful color scheme has been employed, and in other buildings, the principals have succeeded in getting the floors periodically and thoroughly washed and cleaned so as to keep them as light as possible. Several things are enumerated in the report which should be remedied and kept remedied.

"1. Clean and bleach the floors with thoroughness. Where they are roughened and worn, with grime ground into them, let them be resurfaced. If they must be oiled, let it be done lightly, and all surplus oil removed before the floors are used. Have them thoroughly rewashed and reoiled at proper intervals. The policy should be adopted of purchasing nothing in the future but movable furniture; this to gradually replace the older type.

"2. Paint all ceilings a pure white. It is especially desirable in all the older buildings, in portables, and in temporary structures. Black on white, producing a neutral gray, is not so objectional as black on yellow-orange, or orange-brown, producing a sombre and disagreeable effect.

"3. The walls above the dado, wainscot, and blackboards, especially in older buildings, should be painted white, ivory, very light neutral gray, or a light buff. For the newer buildings with large window exposure, which receive considerable sunshine, the wall tints should be not quite so light. The white surfacing of walls should be employed especially in portables and basement rooms.

"4. The dado or wainscot, where it is wood or plaster, should be painted a somewhat darker color than the wall above. This should be watched in rooms that are deficient in window area, or where the area is obscured by trees or buildings.

"5. Most of the desk tops in schools, particularly in the older buildings, need to be thoroughly cleaned, brought to their original natural color, and finished with good clear varnish in the natural color of the wood, without any stain whatever. For every reason, the desk tops should be made to appear as bright and clean as practicable, and the pupils should be encouraged to keep them in good condition.

"6. Keep the blackboard area down to the minimum necessary for the effective work of the class. It is especially desirable for those rooms in which there is a deficiency of natural illumination. A blackboard absorbs a major percentage of the light which falls upon it, whereas a light-colored wall reflects a major percentage of the light which falls upon it. The more the light wall space, the lighter the illumination of the room. At present there is an excessive amount of blackboard in most classrooms. Minimum standards should be followed.

"7. Windows should be washed fairly frequently. They should be constructed in a way that will make it fairly easy for the janitor to wash them. This feature appears not to have been taken into account in choosing the designs of the windows in certain of the buildings."

The detailed plans for improving the buildings should be worked out by teachers and principals under the guidance and with the oversight of the supervisory officials. A pamphlet containing the commonly accepted standards for all these things should be on hand, and there should be a small library of reference material in the administrative office.

—New York, N. Y. The board of education has recently approved plans for two new high schools. The Richmond Hill high school will be a four-story structure, with a capacity of 2,464 pupils, and will cost $2,074,000.

The DeWitt Clinton high school will accommodate 5,124 pupils, will cost $3,357,000, and will be the largest secondary school building in the state.

—Seattle, Wash. Emphasis upon methods of helping the individual pupils is showing direct results in the promotion record of the schools. During the semester ending June, 1926, 927 elementary school pupils out of every thousand made one semester's advancement, while only 73 failed to be advanced. This is an improvement over the corresponding semester for the previous year, when 917 out of every thousand were promoted.

Solve Your Laboratory Equipment Problems at the DALLAS N.E.A.!

At the Sheldon Booth, No. 330, with laboratory, home economics and vocational furniture right before you, you can sit down at the tables, open the drawers, try the locks, examine stoves, plumbing, fumehoods, methods of construction — discuss your equipment problems with direct factory representatives—settle all of the little details that have been bothering you. Here is a source of information far superior to a discussion in your office with only catalog illustrations to look at!

The Sheldon exhibit will include three new developments — one in science — one in home economics — one in shop work. They have been brought forward to meet the growing demand for a more efficient and economical use of floor space in the modern school.

A cordial reception awaits you at Booth 330. Bring your blueprints with you and we will do our best to help you with your problems.

E. H. Sheldon & Company

Laboratory, Home Economics and Vocational Furniture

MUSKEGON, MICHIGAN

Artist's Table No. 535 shown above is a standard design for school art rooms, and is a very well made article.

HAMILTON
School Furniture

Has back of it nearly fifty years experience manufacturing quality goods.

Real Quality is the highest type of economy, and is the best means of eliminating waste. Buy for the future and it will pay dividends, as costs and prices will never be lower than now. Ask for catalog.

The Hamilton Mfg. Co.
Two Rivers, Wis.

CHICAGO CORRESPONDENCE

"The meeting will come to order."
"Keep your mouth shut."
"You're a liar."
"Then you're a damned liar."
"You're a rat and you're playing rat hole politics in this matter."

"The curse of Chicago is these damned experts. They are trying to lay a foundation for classes of 100 pupils to a teacher."

These caustic epithets and inelegantly expressed educational charges were aired at a recent meeting of the city council committee on schools, fire and civil service by certain of the aldermen and by Margaret Haley, business representative of the Chicago Teachers' Federation.

Miss Haley charged that the Carnegie and Rockefeller Foundations assisted by certain well-known educators some of whom are nationally known are trying to wreck the public school system and shackle Illinois' school children under a capitalistic and "factoryized" educational system.

It should be understood that the above mentioned statements were yelled. NOT at a meeting of the school board, but at a special session of a committee of city fathers called presumably to hear charges against the administration of the school system and possibly to confirm the names of four school board members, recently nominated by the mayor.

The discussion was not all on such a low plane. At one of the other meetings of this same committee, Mrs. Helen Hefferan, present school board member and nominee for reappointment, uttered a gem of philosophy that is worthy of a sermon on the civic conscience or an editorial on educational philosophy. She had been quizzed by the aldermen as to whether she would vote to oust Superintendent McAndrew if the aldermen confirmed her appointment. In her statement of reply, during which she refused to commit herself to any such course of action, she declared:

"Superintendents come and go. Attacks on them are farcical exhibitions of misplaced civic conscience.

"When Superintendent McAndrew arrived in Chicago there was not a protest. Even Margaret Haley acclaimed him, saying: 'The appointment of Mr. McAndrew as superintendent is a great thing for Chicago. He is a man of prominence and great national reputation. We members of the Teachers' Federation are ready to stand back of him in his administeration!'

"That is always the case. The public always receives a superintendent well and later gets tired of him."

How the Chicago Public Schools are Getting Deeper in Debt

Year.	Annual Deficits at Beginning of the Year (Accumulative)
1917	($2,100,000)
1918	($4,379,000)
1919	($8,600,000)
1920	($11,400,000)
1921	($16,600,000)
1922[1]	($11,700,000)
1923	($13,700,000)
1924	($15,700,000)
1925	($18,700,000)
1926	($21,400,000)
1927	(No data yet available)

[1]School tax rate increase effective this year.

Amount of Money Wasted on Interest Payments for Current Expenditures—Paid to the Banks at 5%

1916: $ 30,000
1925: 921,000

Near the close of the semester, all Chicago principals received the following bulletin from the Superintendent of Schools:

For the past several years an increasing number of complaints have been received from parents protesting against abuses connected with graduation exercises in the public schools: Pressure for the purchase of photographs, rings, school annual, graduation parties, etc. A questionary addressed to the principals of schools for their opinion as to the value of graduation exercises has brought a number of varied answers, among which are these pertinent observations:

"Diplomas and graduation exercises at the completion of the eighth grade are survivals of the time when few children continued their schooling beyond that grade." "There should be no breaks of the educational service into isolated units." "Children should attend school throughout the whole kindergarten, elementary, junior high school, senior high school, and junior college course." "Graduation exercises are joyous periods in the life of a child and should not be abolished." "The grief and sadness of disappointed children at graduation time is sufficient cause for abolishing graduation programs." "It is absurd to issue diplomas for the completion of the sixth grade and the eighth grade when we are making such strenuous efforts to avoid breaks, to get closer articulation, and to keep children in school." "With all the urge to economize, it is foolish to expend as much money as the school system does on evening meetings for which the rules require the expenditure of money for light, heat, service, etc." "Let us have simple 'good-by' day-time exercises in which all the children of the highest grade participate, both those who receive promotion and those who fail to receive it."

The poll from the principals revealed: To abolish graduation exercises and diplomas, 201 principals. Two parent-teacher associations principals; to retain graduation exercises, 88 sent in letters recommending abolition.

"Permex"

Six Provable Reasons Why "PERMEX" Is The "ECONOMICAL" Writing Fluid for Schools

Because "PERMEX" comes to you in paste form (in tubes) and because it makes the very finest quality writing fluid, it offers 6 definite features of superiority for your use:

1. *It is Economical* - You buy nothing but ink - no water. "PERMEX" comes to you in concentrated paste form - you add the water. This makes it cost 1-2 the price of other "standard writing fluids."

2. *Free from Sediment* - "PERMEX" is smooth flowing because its scientific process of manufacture insures quick and thorough dissolution when the tube is squeezed into a bottle of water.

3. *It is Non-Corrosive* - "PERMEX" is exceptionally low in acidity and consequently non-corrosive.

4. *Saves Storage Space* - "PERMEX" means economical storage as it occupies only one-sixteenth of the storage space required for fluid inks.

5. *No Breakage - No Freezing* - All danger of breakage and leakage is entirely eliminated because "PERMEX" Writing Fluid Paste is contained in collapsible tubes like tooth paste or shaving cream. Weather conditions do not affect "PERMEX." It can be shipped at any time of the year without freezing.

6. *Lower Transportation Charges* - Prior to the discovery of a high grade writing fluid produced in paste form (collapsible tubes) schools were obliged to pay heavy charges for bottles, kegs and barrels and their higher transportation rates. These charges amount to a sum which doubles the price. Now it is no longer necessary to continue this waste. *"PERMEX" weighs only one twenty-sixth as much as fluid ink.*

We guarantee "PERMEX" to be as good as, or better than, any writing fluid that can be bought for any money.

Cover your 1927 ink requirements with "PERMEX" and save money and trouble. Sample and prices upon request.

THE AMERICAN CRAYON COMPANY

HOME OFFICE AND FACTORIES
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SANDUSKY · OHIO

"Old Faithful"

NEW YORK · DALLAS · SAN FRANCISCO

An Object Lesson In

"HOW TO PREVENT YOUR BLACKBOARDS FROM BEING RUINED"

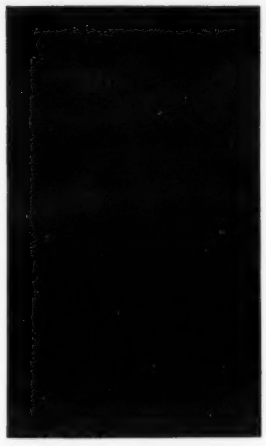


Fig. 1—Glossy

Fig. 2—Gray

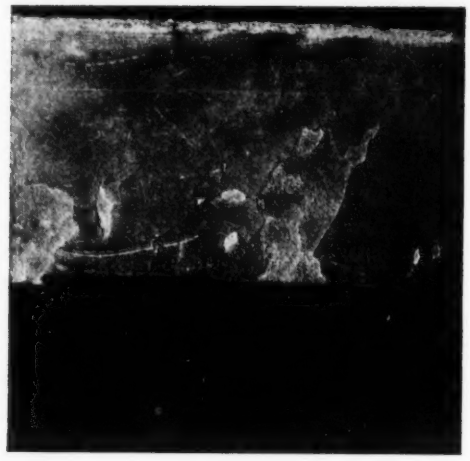


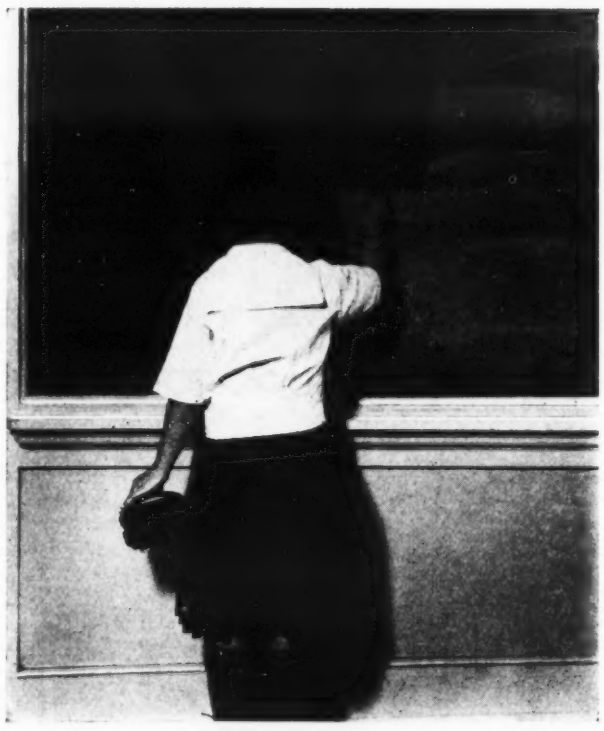
Fig. 3—Peeling

These pictures show blackboards before and after Mohawk Machine Service

Thousands of dollars have been wasted by junking blackboards that were considered worn out. SLATE NEVER WEARS OUT and by the Mohawk Resurfacing Process the roughest and shiniest slate blackboard can be made like new.

The photographic reproductions shown above depict most graphically the three stages of surface ruin that can be so easily prevented. Before discarding another piece of old blackboard you should have our service man demonstrate the possibility of renewing its life indefinitely. Over 700 schools and colleges in the United States and Canada recommend our service most highly.

After your bad blackboards have been reconditioned the Mohawk Cleaning and Drying Kit will keep them so. This is the most SANITARY and ECONOMICAL way of cleaning boards and it will eliminate repairs in the future.



Is your class room equipped with a blackboard washing and drying kit?

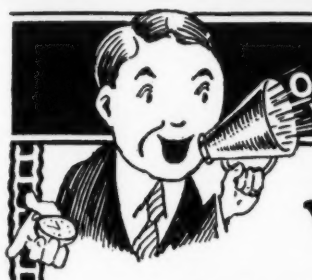
It will keep the boards 100% sanitary and 100% black.

There will be no eye strain if they are properly dried when washed.

Write us about your blackboard problems and we will gladly submit estimate without obligation.

Mohawk Slate Machine Co.

1516 Sansom St. *Philadelphia*



MILLER SCHOOL WARDROBE

WRAP STORAGE IN SCHOOLS

Our first impression when we started manufacturing the Miller School Wardrobe was that it should be used only in GRADE SCHOOLS. Subsequently we were requested to furnish this wardrobe for JUNIOR HIGH SCHOOLS. The cities that have put them in Junior High Schools are now putting them in the HIGH SCHOOLS.

WHY?

1. When wrap storage is in the class room, you have PERFECT DISCIPLINE and SUPERVISION.
2. NO PETTY PILFERING as wraps are under the eyes of teacher and pupils all the time.
3. CLASS MOVEMENTS are SPEEDED UP as there is no going between classes to the wrap storage space to secure books, etc.
4. RECORD OF ALL TARDINESS accurately kept. In addition to the wardrobe placed in class room or where the class assembles, there is placed in the corridor by the principal's office a four door set of Miller Wardrobes. THIS IS KNOWN AS THE LATE WARDROBE. Pupils arriving late must hang wraps here. This wardrobe kept under lock. Must go in principal's office to get into this wardrobe.
5. Classes assembled and dismissed from A GIVEN POINT. No leaving school prior to dismissal time.
6. PERFECT VENTILATION of wraps. Not possible in any other system of wrap storage in schools.
7. NO TEMPTATION to go to wrap storage place in case of fire the same as when wrap storage is kept in corridor.
8. ELIMINATION OF NOISE as this wardrobe is noiseless in its operation.
9. NO COST OF UPKEEP. First cost the last cost.

For complete information on the MILLER SCHOOL WARDROBE, write for catalogue W-6.

K-M SUPPLY COMPANY
123 West 8th Street, Kansas City, Mo.

RATIO OF CURRENT SCHOOL EXPENSE TO CURRENT CITY AND SCHOOL EXPENSE

The research division of the National Education Association has issued a circular giving data on school expenses for 248 cities of 30,000 population or over, for the fiscal year 1924. The figures are taken from Financial Statistics of Cities for 1924, of the U. S. Bureau of the Census, and cover such items as the trend of ratio of current expense, 1919 to 1924, and causes of rapid increases in current expenses of schools. The material is presented in two forms: By individual cities, and by population groups. The total per cent of expense for the twelve cities in group one (cities 500,000 and over) was 34.4, and the grand total for the 248 cities was 37.9. New York had 35.9, Chicago had 34.3 and Detroit 34.2. San Francisco was the lowest in group one, with 26.6 per cent.

In the second group, made up of cities from 300,000 to 500,000 in population, Minneapolis had 41.1 per cent, while Jersey City was lowest, with 25.7.

In the third group, Youngstown had 57.2 per cent, while Nashville had 28.8.

In the fourth group, cities of from 50,000 to 100,000, the highest was Cedar Rapids, Iowa, with 61.3, while the lowest was Savannah, with 22.7 per cent.

In the fifth group, cities of from 30,000 to 50,000 population, the highest was 60.8, and the lowest was 31.6.

One table gives the ratio of school expenses in cities of 30,000 population and over, summarized by population groups. In group one, the ratio was 34.4 per cent for 1924; in group two, the ratio is 34.7; in group three, the ratio is 42.9; in group four the ratio is 44.8 and in group five, it is 45.4.

TEACHERS AND ADMINISTRATION

—The records would go to prove that teachers enjoy superior health as compared with other workers, says the United States bureau of education. Contrary to general belief, it is stated, statistics show that the teacher is not more subject to diseases of the respiratory organs than other indoor workers, nor to diseases of the digestive organs. In regard to nervous diseases, however, and especially neurasthenia, or nervous exhaustion, records are said to be not so favorable to the teacher.

—Evansville, Ind. More than $45,000 have been distributed among the teachers for travel and study taken last summer. A number of teachers were on the list of those having five credits for summer work. Three teachers will each receive $200 bonus for trips to Europe. It is believed there will be a reawakening among these teachers due to new study interests and a broadening of vision because of the extended travel.

—Evansville, Ind., has adopted a sick benefit plan for teachers which is considered most generous. Under the plan, length of faithful service is rewarded, and every five-year period of service up to twenty years tends to increase the amount of benefits available to teachers. Several teachers in the system have a record of more than twenty years, which entitles them to the maximum of two hundred continuous days of benefits for illness. One teacher of more than thirty years' service is absent on sick leave and draws a regular monthly payment.

—Detroit, Mich. All new teachers, regular substitutes, and cadets are required to take a group intelligence examination under the rules of the school system.

—Glendale, Calif. The teachers of the school system meet regularly each Monday, at four o'clock, for the discussion of pertinent educational topics. The teachers rotate in the discussion of subjects of their own selection. Some especially interesting work has been carried out.

—Former Senator Albert J. Beveridge, speaking in New York City recently, decried the underpayment of teachers. He argued that educators actually are impoverished, while school and college athletics are richly endowed. "Our schools and colleges," he said, "can give their best service only as capable men and women open new paths of knowledge and lead the next generation to a broader understanding of life. Yet, in comparison to the sums spent on instruction in athletics, the amount devoted to learning itself is pitifully small."

—An increase of $25 per year is allowed teachers or principals in the schools of Putnam, Conn., upon satisfactory completion of thirty hours of approved professional study. No credit will be given for units of less than thirty hours. Increase of more than $50 in any two years will not be allowed, nor of more than $100 during the period of service. Salary increases begin the school year following the completion of the study and are permanent. Courses undertaken by teachers must have the approval of the superintendent of schools and must be completed in accordance with requirements of the institution in which the study is taken.

—Absence of teachers from school on account of sickness, as compared with records of industrial workers and clerical groups, seems to indicate the superior health of teachers. Contrary to general belief, the teacher is not more subject to diseases of the respiratory organs than other indoor workers, nor to diseases of the digestive organs. In regard to nervous diseases, however, and especially neurasthenia, or nervous exhaustion, records are not so favorable to the teacher, according to Dr. James F. Rogers, chief of the divison of physical education and school hygiene, published by the Bureau of Education in School Health Studies No. 12. Among teachers of New York City, neurasthenia is found to increase with age up to 45-54 years.

HOOD RIVER SALARY SCHEDULE

The school board of Hood River, Oreg., on September 1, 1926, adopted a new salary schedule for grade and high school teachers. Under the rules, a grade teacher must be a high school and normal school graduate, with two years of successful experience in similar grades elsewhere. A junior high school teacher must have three years of experience. A high school teacher must be a college or university graduate and must meet the requirements of the state education department for high school teachers.

In the Coe school the salary ranges from $110 to $150 per month, with an increase of $5 per month for each succeeding year of service up to the maximum; in the Park school, the salary ranges from $120 to $160 per month, with an increase of $5 for each additional year;

MAXWELL'S WINDOW SHADES Are DEPENDABLE Shades

Window Shades of Every Description Made to Order

The AIRANLITE *Double Roll Shade*

MOUNTED ON PATENTED BRACKETS IS THE PERFECT SCHOOL SHADE.

It gives a correct and scientific diffusion of light and permits window ventilation.

It is easy to adjust and cannot get out of order—is strong and durable—good looking and well made.

AIRANLITE Double Roll Shades can be made of any standard shade cloth or of canvas.

For school shades our special woven tan colored canvas is recommended.

The Patented Adjustable Light Stop does away with streaks of light between rollers and the patented brackets hold shades in perfect alignment, giving the appearance on the outside, of being one continuous shade.

For Long and Satisfactory Service Use AIRANLITE DOUBLE ROLL SHADES

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They Increase the Efficiency and Improve the Health of Teachers and Pupils.

Write for Prices and Catalog.

S. A. MAXWELL & CO., Inc.

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CAUTION!

Users of double roll shades are cautioned against infringements and imitations, as the AIRANLITE Patented Double Roll Shade is fully protected by U. S. Patents.

Be sure you get AIRANLITE Double Roll Shades mounted on AIRANLITE Patented Brackets.

in the junior high school the salary ranges from $120 to $160 per month, with an increase of $5 for each additional year.

In the high school the salary ranges from $130 to $185 per month, with an annual increase of $5 per month for each additional year of service.

The principal of the Coe school, with five to six teachers is paid $150 to $180 per month, the principal of the Park school, with ten to eleven teachers, is paid $160 to $200 per month; the principal of the junior high school, with four teachers, is paid $150 to $200 per month, and the high school principal, with fifteen teachers in charge, is paid $200 to $250 per month.

SALARY INCREASES THROUGH PROFESSIONAL STUDY

—At Putnam, Conn., it is estimated one third of the entire teaching force was enrolled in summer schools the past year or traveled abroad. After appointment in Putnam, teachers may have their salaries increased for professional study according to the following plan:

1. Twenty-five dollars ($25) for the satisfactory completion of a course of study, previously approved by the superintendent of schools, of thirty hours of recitation and lecture with the required preparation work. Units of less than thirty hours will not be credited.
2. No teacher shall thereby receive an increase in salary of more than $50 in any two years or of more than $100 during the period of service.
3. Such salary increases shall be added to the regular salary of the school year following that in which study and improvement were made and shall thereafter be permanent during the period of service.
4. Such courses may be taken in Putnam as university extension courses, or elsewhere as normal or university courses in residence, but in all cases the course shall be as approved by the superintendent of schools, and the teacher shall complete satisfactorily the work of the course as may be required in the institution in which it may be taken.
5. These provisions apply to all teachers and principals.

TEACHERS' SALARIES

—The Federation of Teachers Associations of New York City condemns the single salary plan. A report holds that the single salary schedule would provide a uniform rate for all grades in the education system from the 1A teacher to the college professor. "The mere statement of the proposition causes its own condemnation," it added. Furthermore, the committee contended that the inevitable consequence of a single salary schedule is a general lowering of pay rates.

—The New York City Principals' Association has asked for the establishment of a single rate of pay for principals, beginning at $6,600, increasing $480 a year for three years to a maximum of $7,500. The citizens' committee had recommended a normal maximum of $6,144, which it was shown, was below the pay of first assistants in high schools.

—Forty-seven women teachers of crippled children in New York City have presented a request for higher pay. These teachers visit the homes of crippled children where they do their teaching. They receive $6.50 a day for six days' work and must pay their own carfare. The Citizens' Committee on teachers' salaries has recommended a rate of $9 for the first two years of service, and $12 a day thereafter.

—Cincinnati, Ohio. The committee on teachers' salaries of the board of education has completed its hearing on the salary schedule which is to be adopted as a result of the favorable vote upon the request of the board for a special tax rate of not more than one mill, for a period of five years.

The committee, in its report, proposes a flat increase of $20 a month from January, 1927, for the remainder of the present school year, for all full-time day teachers and executives; a proportionate increase of this amount for those teaching less than full-time; and a ten per cent increase for substitutes and evening school teachers and executives who are paid by the day, which is practically the average increase granted to full-time, day-school teachers.

The members of the staff of the vocational bureau in so far as they are rated upon the basis of teachers' salaries are to be included in the provisions for the temporary and permanent increase of salaries.

A permanent salary increase is to be adopted later, to go into effect in September, 1927. In this event, the temporary increase of $20 per month is not to be considered in any manner by the board in the adoption of such a schedule.

With approximately 2,000 teachers and executives in the schools, the proposed increase will cost the school system $40,000 a month or $400,000 a year.

—Nearly twenty associate and district superintendents and examiners of New York City were recently informed that the Supreme Court had granted an application for an order compelling the City Comptroller to pay them the remainder of their salaries for the year 1920. They claimed salaries based on a new salary schedule adopted in 1919. Comptroller Berry contended that as the salary schedule was adopted after the budget had been passed, the schedule was ineffective for 1920.

—Under the will of the late Simon Gratz, a private memorial room has been established in the Jefferson Hospital of Philadelphia, for the free use of any teacher in the school system. Under the arrangement, no charge is to be made by the attending physician or surgeon for services rendered the person occupying the room.

—Teachers in the Gilbert School, Winsted, Conn., who complete twenty years of service, and whose salaries are paid in full by the school, are entitled to leave of absence with full pay for the next school year. If they prefer, they may teach the whole or any part of the year and receive as much of an additional full year's salary as the number of weeks taught bear to the number of weeks of the school year.

—The pension committee of the Maryland Teachers' Association has issued a report, which calls for the passage of a law providing pensions for teachers.

Under the law, teachers would be required to pay a certain percentage of their salaries upon becoming members of the system. The rates vary from 4.28 to 7.75 per cent and provide for the return of the contribution where a teacher withdraws from service before reaching the retirement age. Teachers now in service would contribute one half of the cost of the service benefit and the state would provide the other half.

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Clean all floors with Clean-O-Shine.

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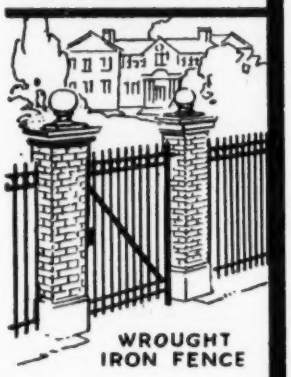

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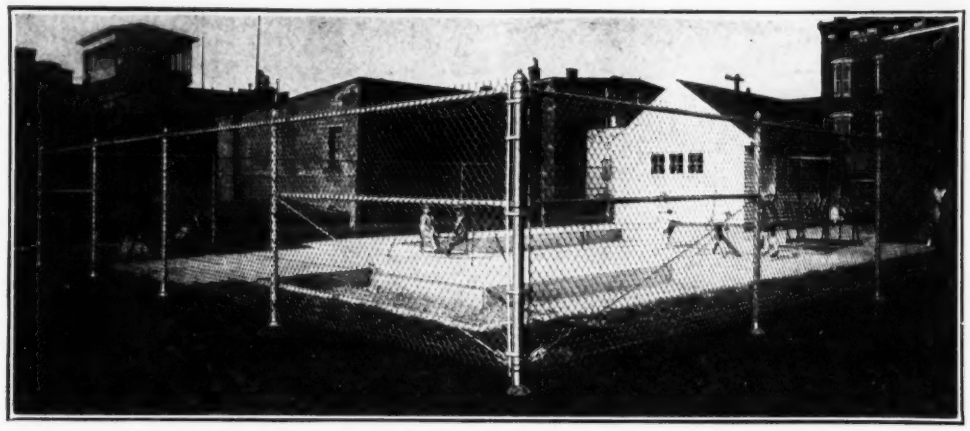

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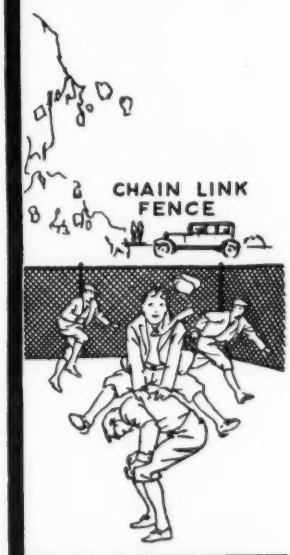

ENCLOSURES

SCHOOL HYGIENE

THE DETECTION AND TREATMENT OF DEAF CHILDREN

Recent surveys of the condition of the hearing of school children in the United States indicate that more than 3,000,000 have hearing defects.

Dr. Edmund P. Fowler and Dr. Harvey Fletcher, of New York, in an article in the "Journal of the American Medical Association" recently discussed the detecting and medical handling of these children, and the results of some tests given.

At the outset, it was recognized that new forms of apparatus especially adapted for testing the hearing in the schools would be necessary; therefore the committee sought the aid of the Bell Telephone Company. As a result, the engineers of the company worked in conjunction with the committee in producing simple apparatus for this work.

The first apparatus developed was intended to replace the watch or acoumeter for making quick tests, and was called a 3-A audiometer. It consists of three parts, namely, a buzzer, an attenuator, and a telephone receiver. The instrument gives results of greater accuracy than can be obtained with the watch-tick test and does not require a specialist to operate it. However, the speed of making the tests is only slightly greater than the watch-tick tests, and was considered too slow for most survey work.

For obtaining increased speed, attention was next concentrated on group methods of testing. An attempt was made to adapt the whispered speech test to group testing. In the first method, simple numbers were whispered and the children were asked to write them on blanks prepared for the purpose. The intensity of the whispered speech was varied by increasing the distance, keeping the speaking intensity constant. If one increases the distance successively, the intensity of the sound reaching the child's ear will decrease by steps of three sensation units, provided there are no sound reflections in the room. To reduce the intensity 21 sensation units, one would have to back away 67 steps, or approximately 200 feet. The test, which requires a very large room, was tried in one of the new school buildings in New York City where such rooms are available. It was tried in a large assembly room and in a gymnasium and the results showed that the method is theoretically sound but entirely impracticable even when used by a specialist. This is due to varying noise conditions, and to the reflection of speech sounds from the walls, floors, and ceilings of the room. It was felt that the method might be used to obtain fairly good results if the room were very quiet and well damped with draperies and rugs, and if it were very large. Even with an ideal room, the time required for making the tests and correcting the records is much longer than that required in the method finally adopted.

In the next group method, the children were tested in their classroom. The same numbers were used and an attempt was made to reduce the intensity of calling these numbers in steps according to three sensation units. The results showed that some of the children with normal hearing had recorded scarcely any number correctly, while some of those who were deafened made comparatively good records.

As a refinement of the method, phonograph records of the numbers were made by a new electrical process developed by the Bell Telephone Laboratories. An attenuator was introduced into the electrical circuit in such a way that the intensity of each number recorded was definitely three sensation units lower than the preceding one. An ordinary phonograph set up in front of the class was used to play the record, thus serving as a substitute for the speaker. Because of the noise conditions encountered, the children made very erratic records even with this refinement. It was found that the method had the serious defect that by its use it was almost impossible to detect cases of hearing loss in one ear when the other ear was normal. A large percentage of the hearing defects occur in one ear only.

The method which finally proved successful was a combination of the individual test and the group test. The phonograph record was used, but instead of projecting the sound into the room, the speech vibrations were taken off the record electrically and sent by means of connecting wires to a telephone receiver in each child's ear. Five distributing trays, each containing eight receivers, were found to be the most convenient means of distributing the receivers to the children. The trays are connected by electrical conductor leads terminating in plugs.

The arrangement of equipment, the kind of phonograph record, and the form of the blank to be used by the children were evolved from the experience obtained in testing several thousand school children in various parts of the country. After the receivers are distributed and properly adjusted on the right ear of the children, they are told that they are going to hear numbers called, first by a woman and then by a man, who seem to be moving farther and farther away. The children are instructed to write as many of the numbers as they can hear. The receivers are changed to the left ear and the test is repeated. For testing the upper grades, a record having three-digit numbers is used, while for the lower grades a record having only two-digit numbers is used. The test has been found impracticable for testing in grades below the second half of the second grade. It was found that no group test could be used for these younger children. Tests of these children with the 3-A audiometer were as convenient and rapid as any other hearing tests with which the authors were familiar.

(Continued on Page 118)

MITCHELL

Safe **"BETTERBILT" Playground Apparatus** *Strong*

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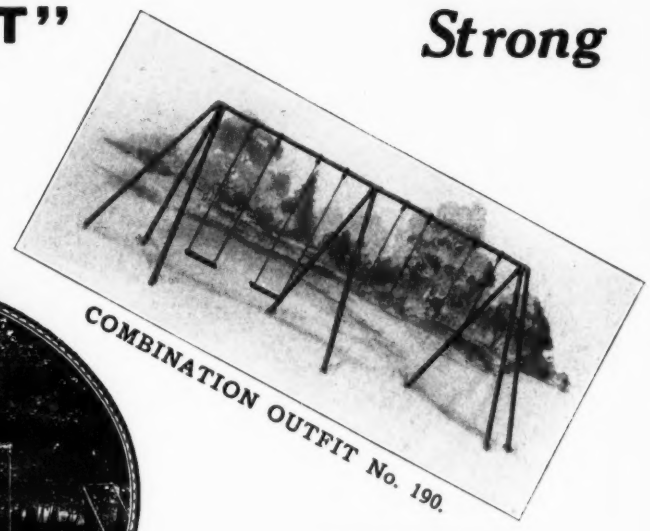
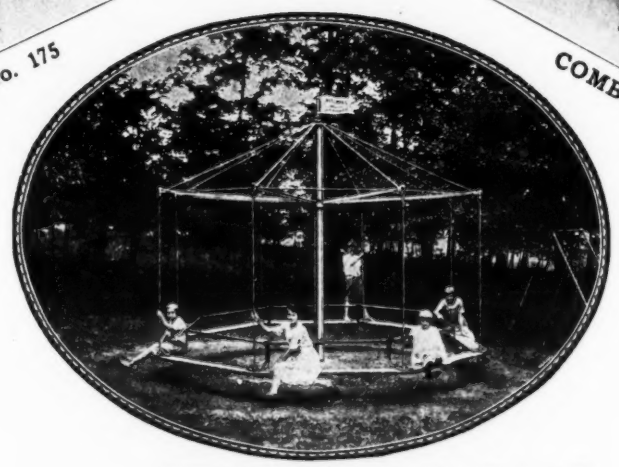


COMBINATION OUTFIT No. 190.



MERRY-WHIRL No. 500 "Patented"

The Mitchell Merry-Whirl will accommodate as many as fifty children at one time and it operates so easily on its roller and ball bearings that one little tot of five or six, can manipulate it alone without excessive exertion. Its ample capacity and variety of motion—swinging in and out from the mast as well as around it—adapts it to places where limited space precludes the use of more than one Playground attraction. A plot 30 ft. square is room enough for the Mitchell Merry-Whirl.

THE NAME MITCHELL IS YOUR GUARANTEE OF SATISFACTION

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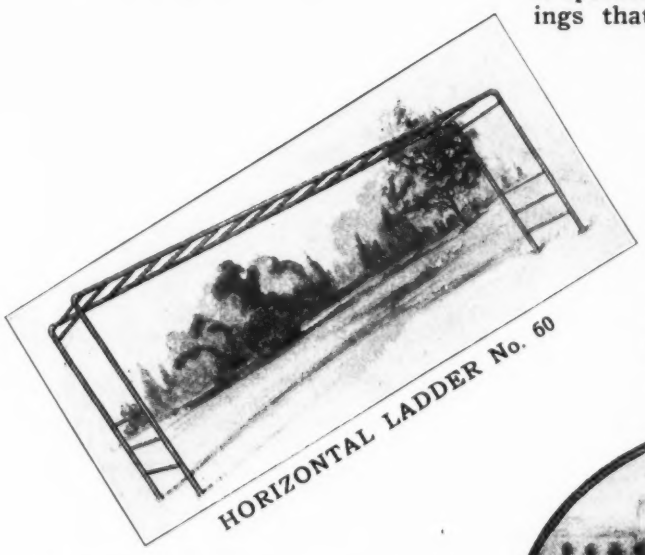
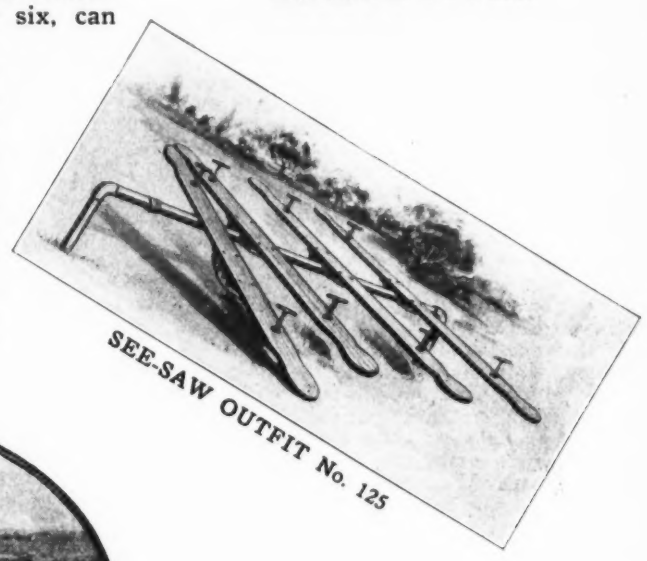


HORIZONTAL LADDER No. 60



SEE-SAW OUTFIT No. 125

FRED W. GREEN
IONIA, MICHIGAN

June 23, 1926.

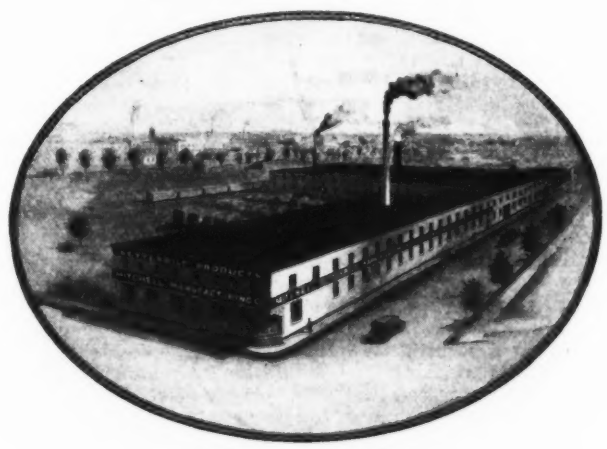
Mitchell Manufacturing Co.,
Milwaukee, Wisconsin.

Gentlemen:—

The Mitchell Merry-Whirl which I purchased from you people last year is in active use daily in our park.
It is giving satisfaction in every way and fully meets our expectations. There is something about the nature of it that makes a strong appeal to the youngsters and I notice that it is never idle when there are children in the park.

Yours very truly,
(Signed) Fred W. Green.

Note.
Mr. Green is now Governor of Michigan.



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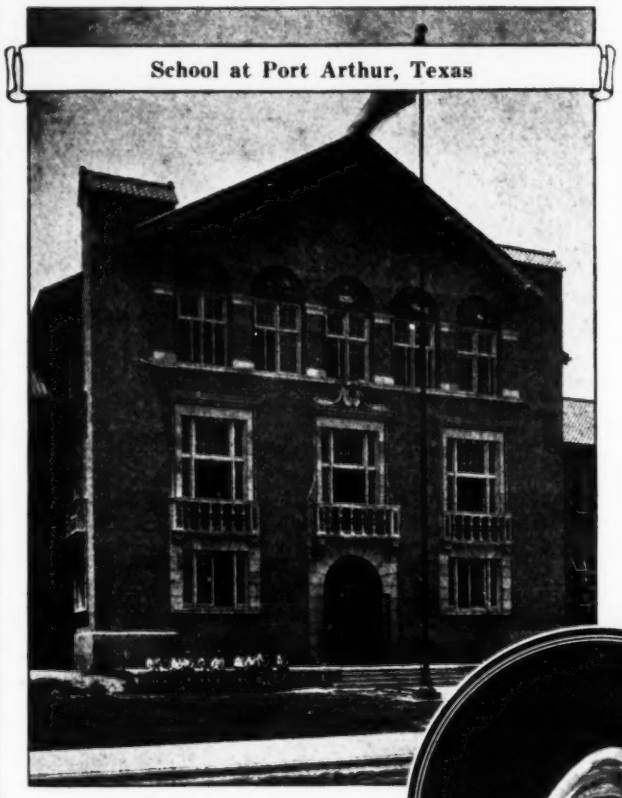

Photo shows perspective of central portion of edifice designed for Port Arthur, Texas, by Wm. B. Ittner, Architect, St. Louis, Mo.

Mr. Ittner appreciates the sanitary value of Halsey Taylor Fountains and has specified them in many of his most pretentious educational structures!

HALSEY TAYLOR
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Automatic Stream Control
Practical Side-Stream

SANITATION is the theme in school construction. Comforts, conveniences and health-safety, but above all the latter! Halsey Taylor Drinking Fountains are nationally known and recognized as the most sanitary as well as the most practical side-stream types. Architects, school authorities and designers generally appreciate their exclusive features which promote sanitation and convenience to a degree not found in any other type or any other make! Write!

THE HALSEY W. TAYLOR CO.
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WHAT IS AUTOMATIC STREAM CONTROL?

The big factor in Halsey Taylor performance is AUTOMATIC STREAM CONTROL! An ingenious device keeps the stream at uniform height regardless of pressure variation. The water is always IN THE BOWL, never on the floor. And two-stream projector makes it impractical for lips to touch the drinking source! Exclusive—distinctive Taylor features.

(Continued from Page 116)

Master sheets were provided for correcting the papers for both the three-digit and two-digit test records. The sheets were arranged so that for comparison they might be placed alongside the numbers written on the blank form by the child.

It was found that with this apparatus and the method outlined, from 75 to 150 children an hour could be tested, depending on the degree of efficiency in organizing the children into groups and getting them to and from the classroom provided.

It was not found practical to make a careful otologic examination of all the deaf children tested, so those of but one school were chosen for the purpose. In this school, 38 had defects in one ear only, and seventeen in both ears. The otologic examination consisted of:

1. A check-up of the child's answers to the questions on the blank form.
2. Examination of nose and throat (rhinitis, tonsils, adenoids, operations).
3. Inspection of eardrum, especially as to mobility, adhesions, congestion, and perforations.
4. Determination of presence or absence of middle-ear negative air pressure.
5. Bone conduction.
6. Use of noise apparatus if indicated.
7. Galton whistle.

With the audiogram and brief history before him the examiner is able to complete twenty cases an hour, including two or three that require more time to determine the lesion. Among the children tested only three cases indicated a diminished bone conduction and only four a diminished high tone perception with the Galton whistle.

As a result of the tests, it was the conclusion that a goodly number of the cases will go on to increasing deafness in later life. However, it is believed that by scientific, thorough, and repeated examinations much will be learned as to potential deafness and its prevention. It is recommended that each school have permanently a quiet room for the examination of the eye, ear, nose, and throat, and that each school have access to a phonograph audiometer (Western Electric Company, No. 4-A), equipped with telephone receivers, and a tone range audiometer (Western Electric Company, No. 2-A).

It is the belief of the committee that special classes for lip-reading should be provided in each school for deaf children, these to be conducted by teachers trained to impart this knowledge, and that special schools for the deaf should be provided for those having a great hearing loss. The amount of deafness requiring special care should be determined from experience, after the first method of teaching has been put in practice.

RULES FOR SWIMMING POOLS

—The Committee on Otorhinologic Hygiene of Swimming of the American Medical Association, has presented a report in which it calls attention to the need of adequate rules for the construction, maintenance, and bacteriologic examination of swimming pools and bathing places. It is also suggested that public health authorities promulgate notices warning persons with colds, head infections, running noses, or ears, that swimming or diving tends to force infection into the sinuses or ears, resulting in serious consequences.

It is suggested that oiled wool or other effective methods of closing the external auditory meatus be advised, in order to prevent external otitis. Improper swimming or diving habits, such as breathing with the head submerged, diving feet first with the nostrils open, blowing the nose, or coughing should be forbidden.

It is suggested that a time limit of 45 minutes to one hour be placed on the use of a pool by each bather in order that the number of bathers at any given time may be reduced, and that the loss of body heat due to chilling be minimized.

Approved Form of Notice

In order to maintain proper standards and protect the health of patrons, it is necessary to insist on observation of the following rules, which are approved and their strict enforcement required by the ——— State Board of Health: Warning: Persons with colds, head infections, "running nose or ears," catarrh, are warned that swimming, diving, etc., tend to force the infection into the sinuses or ears, and result in serious if not fatal complications.

1. All bathers shall use shower baths, including soap, if necessary, before entering the plunge. (The plunge is not intended as a bath tub.)
2. Bathers who have been outside the bathhouse or plunge enclosure shall not reenter without passing through a foot bath and using a shower.
3. Bathers shall be forbidden to wear private bathing suits that are not properly laundered; light colored or undyed wool is suggested.
4. Women shall wear caps while in plunge.
5. Persons not dressed for bathing shall not be allowed on walks surrounding plunge, and bathers shall not be allowed in places provided for spectators.
6. No person suffering from a fever, cold, cough, or inflamed eyes shall be allowed the use of the plunge. (These disorders may be transmitted to others.)
7. No person with sores or other evidence of skin disease, or who is wearing a bandage of any kind, shall be allowed the use of the plunge. (A bandage may conceal a source of infection.)
8. Spitting in, or in any other way contaminating the plunge, and spitting on floors, runway, aisles or dressing rooms shall be prohibited.
9. Public combs or brushes shall not be furnished, and such articles left by bathers shall be permanently removed.
10. Eating within the plunge enclosure shall be prohibited.
11. Bringing or throwing into the plunge any objects that may in any way carry contamination, endanger safety of bathers, or produce unsightliness, shall be prohibited.

The majority of our patrons will observe these rules of their own accord and will render us a great service by reporting any infractions to the attendants. Any person failing to comply with the foregoing rules will be immediately expelled and denied the future privileges of the bathhouse.

Rules for Sanitation and Safety of Swimming Pools

1. All swimming pools are to be maintained with a practical minimum amount of contamination. There shall be not more than 1,000 colonies per cubic centimeter of standard agar medium after incubating for twenty-four hours

(Concluded on Page 120)

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FUN-FUL Playground Equipment is the result of experience, a quarter of a century devoted exclusively to the development and manufacture of children's outdoor health building goods by this Company. The best you can buy, this we guarantee.

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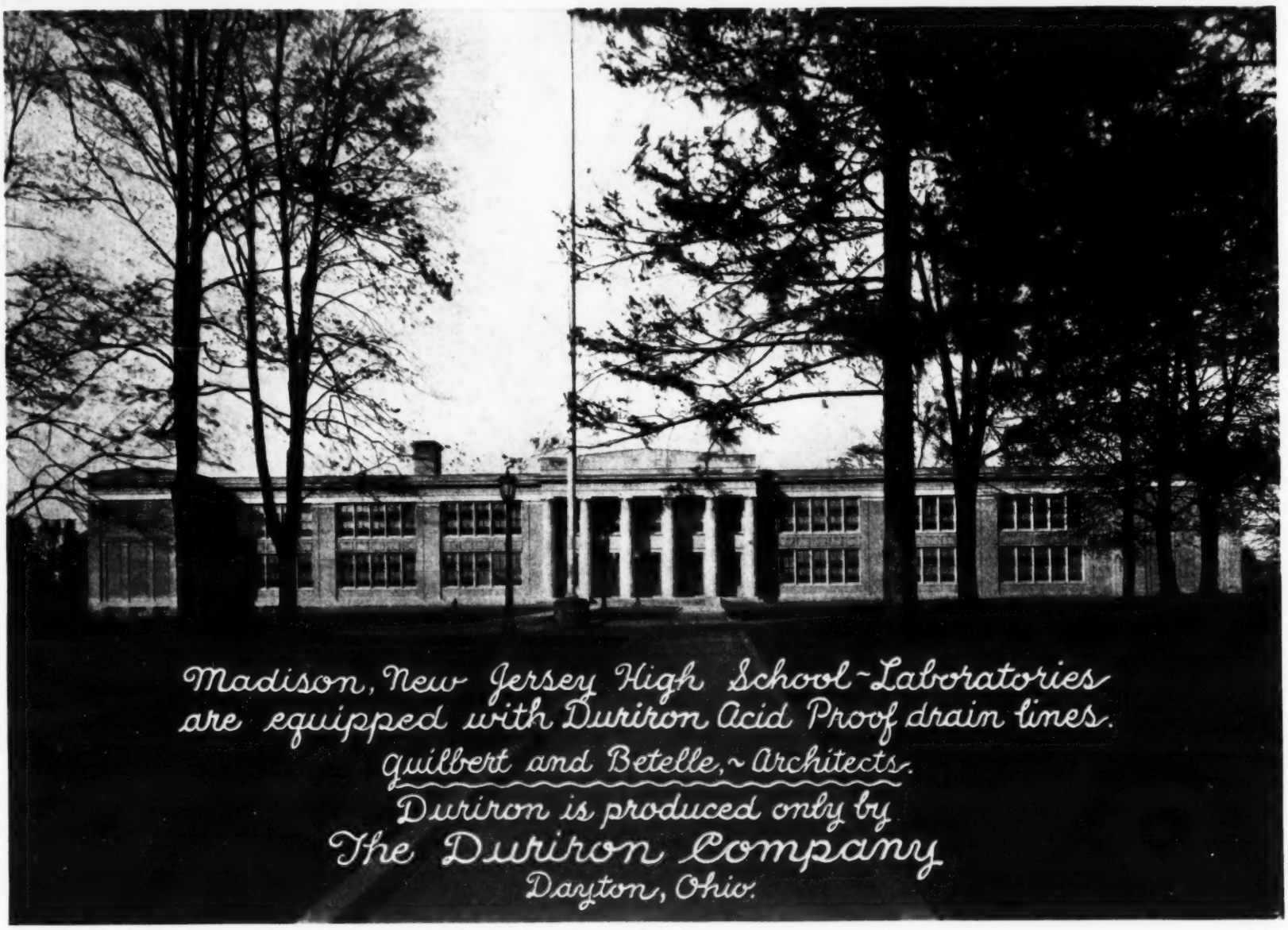
Madison, New Jersey High School~Laboratories
are equipped with Duriron Acid Proof drain lines.
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Duriron is produced only by
The Duriron Company
Dayton, Ohio.

(Concluded from Page 118)

at 37° F. The **B. coli** content shall be such that gas is produced in not more than one and a half of standard lactic broth cultures after incubation for twenty-four hours with 1 c.c. of water.

2. Water in the pool shall at all times of use be sufficiently transparent, under existing lighting conditions, that when the water surface is not excessively agitated by bathers, a person can stand at the side of the pool and see the bottom distinctly where the depth of water is 6 feet or less.

3. Facilities for adequate protection of the pool water against unnecessary sputum contamination by bathers shall be provided.

4. All persons known to be or suspected of being affected with infectious diseases shall be excluded from the pool.

5. Contamination of the pool resulting from lack of personal cleanliness of bathers shall be maintained at a minimum.

6. Construction and appliances shall be such as to reduce to a practical minimum the danger of drowning and of injury to bathers from falls or collisions.

7. Dressing rooms, hallways, toilet rooms, shower rooms and other places to which patrons of a bathhouse have access shall be kept clean and well ventilated at all times.

8. Bathing suits and towels, when distributed to bathers by the pool management, shall be clean and free from excessive bacterial contamination.

9. The management of the pool shall have printed and posted in conspicuous places about the establishment notices briefly informing patrons of the requirements to which they are subject in the maintenance of a safe and sanitary pool. A form of notice is suggested to pool operators; it should be so placed that all bathers cannot fail to read it before entering the pool.

HYGIENE AND SANITATION

—The Public Health Service at Washington has during the year made some studies in goiter infection. In Connecticut the incidence of goiter among those examined was found to be 7 per cent of the boys and 29.4 per cent of the girls; in Massachusetts the percentage was 8.7 per cent among the boys and 22 per cent among the girls; in Cincinnati, some degree of thyroid enlargement was present in 38.4 per cent of the boys and 58.8 per cent of the girls.

—A preliminary survey made by the American Federation for the Hard of Hearing at the suggestion of the United States Bureau of Education indicates that approximately 3,000,000 school children in the United States are afflicted with defective hearing. The committee was appointed for the purpose of determining the best methods of detecting defective hearing in school children and to determine how this handicap may be overcome by instruction. According to the survey many cities have special classes for "hard-of-hearing" children. The present study relates especially to children whose hearing is not so seriously affected as to require segregation in the special schools.

—A dozen railroads and 25 hospitals in Georgia are cooperating with the state board of health in supplying needed medical and surgical attention for rural school children of the state. Children may be taken to the nearest hospital, where they will receive care and treatment for two days at the minimum rate. The railroads have offered half fare for the parent accompanying the child, and one-half of half fare for children under 12 years of age.

To discover the best methods of detecting defective hearing in children in public schools, and to determine how this handicap may be overcome in school instruction, the American Federation of Organizations for the Hard of Hearing, at the suggestion of the Bureau of Education, appointed a committee to conduct a study in public schools of the country. A preliminary survey by the committee indicates that the hearing of 3,000,000 school children is defective. In many cities, special classes have been conducted for seriously hard-of-hearing children.

—A systematic effort will be made in New York State to immunize against diphtheria all children in the state up to 10 years of age. The movement is under the leadership of the State department of health in cooperation with the medical organizations of the state, and the state charities aid association. The movement involves a five-year program, and the work will be closely followed up by the medical inspection bureau of the state education department.

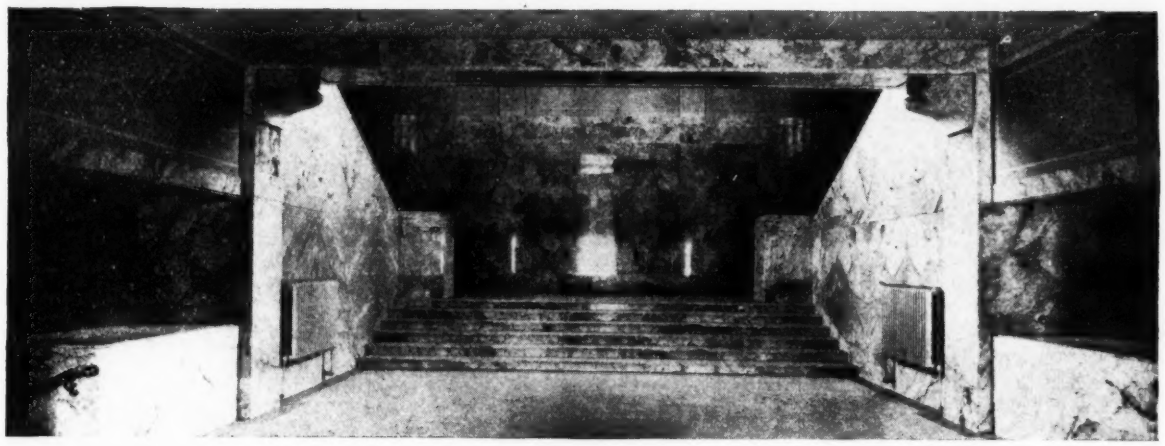
—As a preventive of goiter, chocolate-iodine tablets are furnished to pupils in the public schools of Plainfield, Wis., by the local parent-teacher association.

—Mr. Clifford L. Brownell, for several years instructor in the Connecticut Summer Normal School, has become director of health and physical education at Newton, Mass.

—Parents of London (England) children attending council schools have a deep-rooted objection to their children being examined by doctors. Fifty per cent of the parents refuse advice. Extracts from some of the letters written in protest follow: "I desire my daughter's teeth to remain as they are. The same power that placed them there will make due change when necessary." "Teeth will drop out and the second teeth will never come if the first are removed." "Father has had toothache all his life, so the child will have to put up with it." "Squint is heaven sent. It is wrong to tamper with it." "Dad has lived all his life with only one eye."

—Boise, Idaho. Physical examinations were recently made of all pupils entering the 1-B classes at the beginning of the second semester. The examinations covered vision, hearing, teeth, and throat conditions. In each case, the children were accompanied by their mothers, in order that the school may cooperate with the home in improving the physical welfare of the children.

—Marie C. Doermann, state food specialist for New Jersey, asserts that in schools where one or more hot foods are served, the scholastic rating is higher and there are fewer underweight children. The serving of the hot lunch is a matter which affects the entire community, she believes, and therefore should have the whole-hearted support of boards of education, parent teacher associations and other civic organizations.



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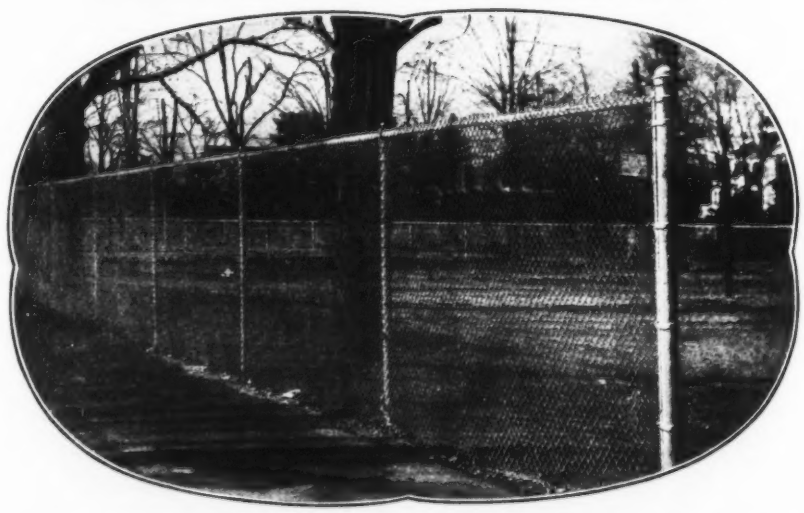

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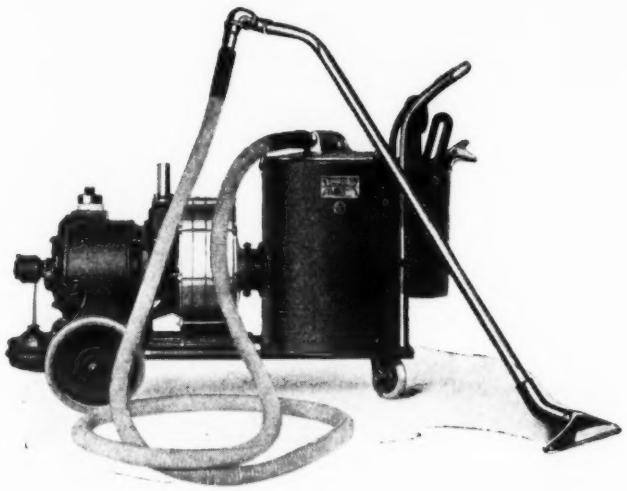

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THREE-YEAR NORMAL COURSE IN WASHINGTON, D. C.

The two normal schools for training teachers for the elementary schools of the District of Columbia will give three-year courses in the future instead of two-year as at present. The change will take place at the beginning of the next school year. This is the decision of the District of Columbia board of education by unanimous vote on the recommendation of Dr. Frank W. Ballou, superintendent of schools. It is the recommendation of the recent survey made by the United States Bureau of Education at the request of the school board. A. J. Klein, W. S. Deffenbaugh, and L. R. Alderman are the three men from the Bureau who constituted the survey committee.

The District of Columbia has two normal schools for the training of teachers, the Wilson school for teachers for white schools and the Miner school for teachers for colored schools. Both are now turning out each year more graduates than the number of vacancies to be filled in the District system. The situation as far as the white schools are concerned has not been serious until the past two years. Vacancies exist now each year for only about two thirds of the graduates. During the past five years ninety per cent of the graduates of the Wilson Normal School have been placed in the city system.

The situation for the Miner Normal School, training teachers for the colored schools, has been serious for some time. The number of graduates each year far exceeds the vacancies in the city system. In 1924 and 1925, there were five graduates for every vacancy. The average for a five-year period has been 256 graduates for each 100 positions. During these five years every vacancy in the negro schools has been filled by a graduate of the Miner normal.

The change in the course of the normal schools is not intended to change the main purpose of these schools of training teachers for the elementary system of the District of Columbia. High-school teachers will be selected as at present from available persons anywhere in the country. The change is in keeping with what seems to be a movement among city normal schools throughout the country. It is not to be confused with the adoption of the four-year course by a considerable number of state normal schools. Such state schools usually continue to give the two-year course offering the four-year course as an alternate, particularly for young men and women preparing for teaching in junior high schools, in senior high schools, and for supervisory work.

The problem of the District normal school is quite distinct from that of the city normal school. The District of Columbia normal schools have a problem which is practically the same as that of city normals. Many of them are facing the situation of having more graduates each year than they can place in local positions. They are, therefore, tending toward three-year courses to replace the previous two-year course training for elementary school work.

A recent study of the trend in the city normal schools has been made by Dr. A. L. Suhrie of New York University, formerly principal of the Cleveland School of Education. He finds: "As to kindergarten and elementary curricula, New York, Boston, and Chicago are on or are emerging into the three-year pre-service level. Cleveland, Detroit, Philadelphia, and St. Louis are on the two-year pre-service level. Cleveland has the three-year kindergarten and elementary curricula under discussion. New York permits the rapid advancement group to complete the kindergarten and elementary three-year pre-service curricula in two and one half years. Detroit and St. Louis in addition to the two-year course, offer four years of pre-service training for kindergarten, elementary, junior high, and senior high-school teaching. Boston offers four years of pre-service training for junior high and five years for senior high-school teaching. Chicago offers a one-year course for college graduates who decide they want to prepare for kindergarten and elementary teaching, and Boston offers a one-year course for graduates who wish to prepare for senior high-school teaching.

"In Cincinnati they offer a five-year pre-service course for each of the kindergarten, elementary, junior high, senior high, and special-training fields; Rochester and Syracuse each offer three years of pre-service training for kindergarten, elementary teaching. Richmond has the three-year kindergarten, elementary and junior high-school curriculum under consideration. Kansas City, Louisville, Atlanta, Richmond, and Bridgeport each offer a two-year pre-service course for kindergarten and elementary teaching. Kansas City has a three-year pre-service course for junior high-school teaching. Louisville and Richmond each has a curriculum of two years in length for junior high-school teachers."

Beginning with September, 1926, the Cleveland normal school course will become a three-year course.

Early Delivery of School Supplies

The superintendent of schools of the District of Columbia, with the assistance of supervisory officers and administrative principals, is working out a plan for the purchase and delivery of school supplies so that they will be in the various school buildings by the opening of the fall term school year. Considerable embarrassment has been caused during past years by the fact that supplies have not always been on hand. The delay has been due to the delayed requests from school principals; delays in getting prices from dealers, and delays by dealers in delivery beyond the time agreed. This last has been due to the fact that dealers have been buried with late orders in such volumes that they are unable to handle them with promptness. They certainly will welcome any plans by which orders may be received earlier and more time given for shipment.

The tentative plan now under consideration contemplates the following procedure in the purchase of supplies:

a. Advertising for bids in January.
b. Awarding of the contracts in February.
c. Securing requisitions from the school system by April or May.
d. Purchase of supplies July 1.
e. Deliveries to buildings during August.

If this procedure is inaugurated, it will necessitate making arrangements to have in the sev-

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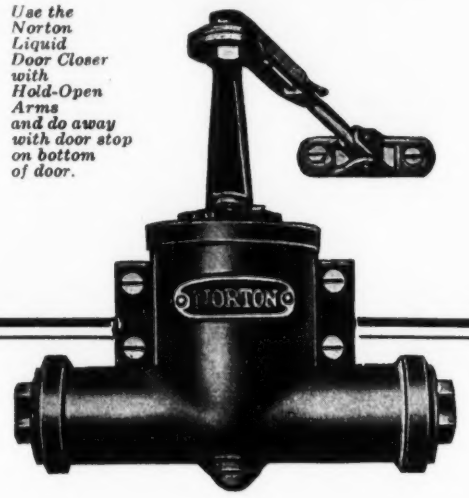

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North East High School, Minneapolis, Minn.

Chicago Public Schools

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East Side High School, Cincinnati, Ohio.

Cass Technical High School, Detroit, Mich.

Technical High School, Omaha, Nebr.

eral divisions of the school system responsible officers, namely, administrative principals, supervising principals, and principals of junior and senior high schools and normal schools, available at their respective buildings to give a proper receipt for such supplies when they are delivered. The business office contemplates the establishment of a definite schedule for the delivering of supplies during the month of August, so that the date of delivery may be known well in advance.

It is the belief of the superintendent that a plan may be worked out whereby one responsible officer may take charge of the receiving of supplies in several school buildings in his neighborhood, thereby relieving the other administrative and supervisory officers of the necessity for being present during the vacation period to discharge that function. It is the further belief that this responsibility may be rotated among the officers in each division of the school system in such a manner that no one officer would be called upon to serve very frequently in that capacity.

SCHOOLHOUSE DEDICATIONS

—The senior high school at Columbia Heights, Minn., was dedicated with two evening programs. There were addresses on the first night by Superintendent T. Edgar Henderson, Secretary G. R. Warren, and President F. C. Spencer of the board of education. Among others who were on the program on the second night were Superintendent O. E. Smith of Anoka, Minn., Prof. F. J. Kelly of the University of Minnesota, and State Commissioner J. M. McConnell. The new high school will house 600 pupils. The cost is $175,000. The architects are Stebbins, Haxby, and Bissell. The members of the board are: F. C. Spencer, President; G. R. Warren, secretary; C. A. Johnson, treasurer; Daniel Howe, C. M. Cook, and Fred Bisset. T. Edgar Henderson is the superintendent.

—The central high school at Wausau, Wis., was dedicated in December with appropriate ceremonies. Those who figured in the several programs were Superintendent S. B. Tobey, President W. A. Taege, Principal E. A. Holm and State Superintendent John Callahan. The building cost $698,402.56. The members of the board are: W. A. Taege, president; J. H. Kalter, vice-president; Jay L. Brown, clerk; A. C. Polster, treasurer; F. A. Boettcher, G. N. Coleman, Miss Nell A. Dunbar, Henry Ellenbecker, Adolph Holub, J. H. Johannes, J. J. Okoneski, Mrs. W. A. Paff, Mrs. S. J. Pentter and E. P. Regner.

—The new school at Loves Park (Rockford), Ill., was dedicated by a presentation speech made by President C. O. Robeson of the school board. The official speakers of the occasion were Mrs. Abbie Jewett Craig, county superintendent, and F. A. Jensen, city superintendent.

—The new colored school completed at Athens, Tenn., was opened by Judge W. O. Wims of the state board of education. A. A. Hanks, county superintendent, and Prof. McAllister of the colored high school of Chattanooga were the formal speakers.

—Principal Leon A. Fisher presided at the dedication of the new school at Finderne near Somerville, N. J. President A. P. Grimm of the Bridgewater township board of education and Supt. Louis D. Deyo were the speakers of the day. The feature of the day was the presentation of flags and bibles.

—The new $160,000 school at Edina, Minn., was dedicated with music and oratory. E. A. McQuarrie, high school principal of Minneapolis, was the principal speaker. Pres. U. H. Adams of the school board made the presentation speech. The members of the school district are: V. H. Adams, president; G. M. Sachs, clerk; Axel Bore, treasurer; W. L. Code, E. W. Smith and R. H. Fryberger. J. S. Glover is principal of the school.

Sund & Dunham were the architects and the Matson Construction Company was the contractor.

—Wausau, Wis., opened its new central high school which was built in three units at a total cost of nearly one-half million dollars. The first unit was begun in 1918, the third was completed in 1926. The men who served as presidents of the board of education during that period were G. D. Jones, W. W. Albers, and W. A. Taege. S. B. Tobey is the superintendent. The Wausau Pilot devoted eight pages to a description of the school and its proposed activities.

—The Nelson School, at Muskegon, Michigan, was dedicated with a suitable program, on November 19, 1926. The building was erected at a total cost of $345,411 and was built under the supervision of Architect H. H. Turner, of Grand Rapids, Mich.

The senior high school, which was dedicated on December 17, was also erected from plans of Mr. H. H. Turner, and cost a total of $704,389. Furniture, fixtures, etc., will bring the cost of the structure to approximately $788,000.

STAGE CURTAINS AND SETTINGS IN AUDITORIUMS

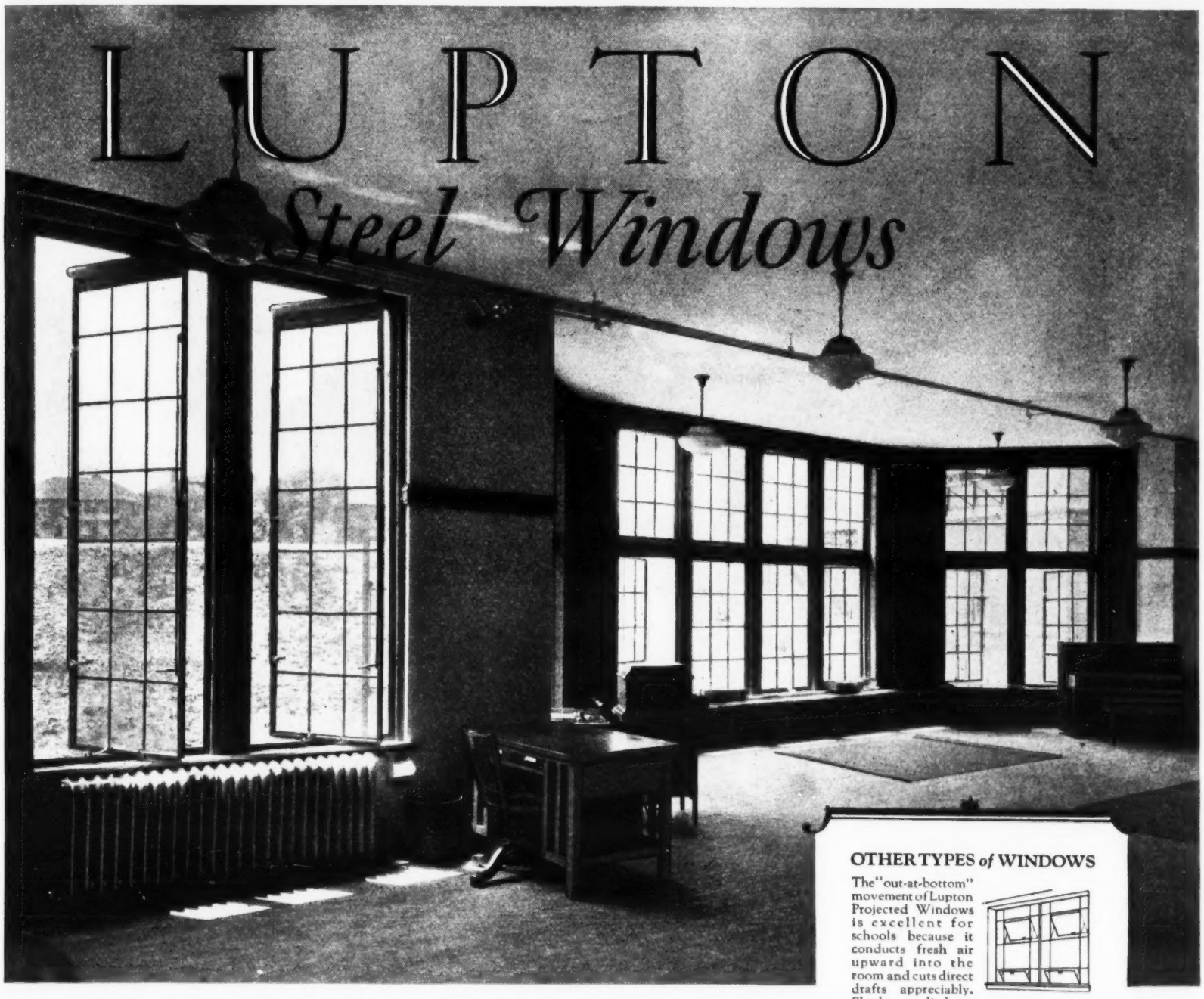
In a recent communication, Supt. William J. O'Shea of the New York City schools points out that the auditoriums and stages of existing elementary and high schools have not been so constructed that dramatic performances requiring scenery, stage settings, draperies, and spotlights can be permitted. The auditoriums of future high schools for dramatic performances will be permissable.

It is pointed out that the auditoriums of some of the existing high schools may be reconstructed to meet the requirements when funds are available. None of the elementary school auditoriums will be constructed so as to permit dramatic performances, as the cost is prohibitive.

Under the rules, it is permissible to erect flameproof portieres across the proscenium arch in any auditorium in a fireproof school building. Such portieres may be installed as a furnishing, but this does not allow the use of scenery, stage setting, special lighting, etc., for dramatic performances.

School organizations desiring to install portieres must first secure the approval of the district superintendent, and the consent of the superintendent of school buildings, who will indicate the conditions under which they may be installed and will supervise the installation.

In existing schools, except the Washington Irving High School, no stage equipment for dramatic purposes, other than portieres, will be approved and no equipment installed.



The Coventry School, Cleveland. John H. Graham & Co., Architects. F. H. Vogel, Contractor

Provide *natural* light and air at moderate cost

MORE than just an element of architectural dignity, the Lupton Casement Windows in the Coventry School illustrated above are the means of providing every room with wholesome daylight and natural ventilation.

So clean-lined are the Casements in their generous openings that the wall seems all of glass. The windows are storm-tight when closed yet they swing open quietly, easily. And, opened to any degree, they ventilate clear to the top. Surely these schoolrooms, sheltered, lighted, and aired by Lupton Casements, are pleasant spots in which to work and study.

You are respectfully urged to confer with Lupton on the window plans for your school. Our specialists will gladly assist you in providing good natural light and air at moderate cost.

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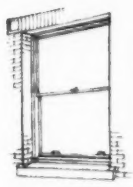
The "out-at-bottom" movement of Lupton Projected Windows is excellent for schools because it conducts fresh air upward into the room and cuts direct drafts appreciably. Shades applied to the ventilators take the place of awnings and give easy light regulation. Operation is easy and positive, and the design is in accord with school architecture.



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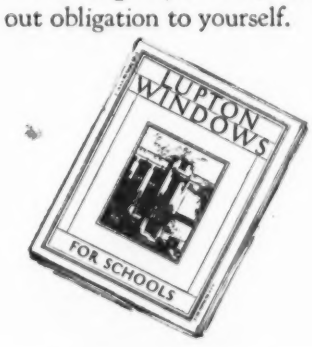

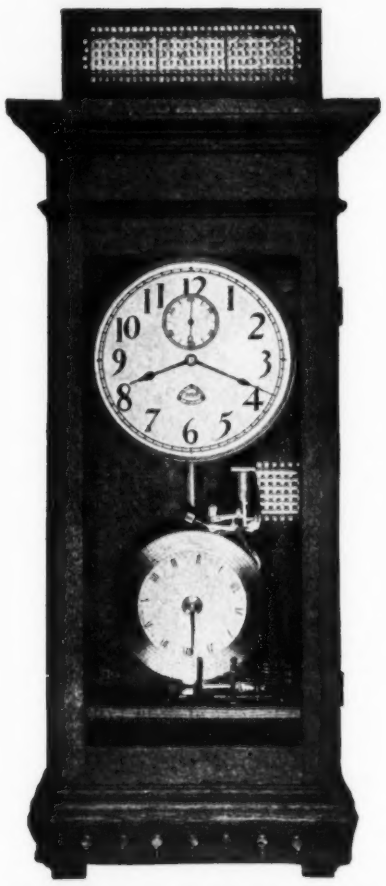

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SCHOOL EXPENDITURES IN SPOKANE, WASH.

The annual report of Mr. R. A. Wilson, secretary of the school board of Spokane, Wash., for the year ending June 30, 1926, contains a comprehensive statement of the receipts, expenditures, and bonded indebtedness of the schools for the year 1925-1926.

Mr. Wilson shows that the school system actually expended $5,100 less than its budget of $1,909,421 called for, and had on hand a total balance of $378,118 in its general fund.

The report summarizes the cost of maintaining the schools on the basis of average daily attendance and per capita cost for the year 1926. The total cost of the grade schools was $1,190,012; the average daily attendance was 14,088, and the per capita cost was $84.46. The total cost of the high schools was $589,539, and the average daily attendance was 4,638. The per capita cost of the high schools was $127.11.

The total cost of grade and high schools was $1,779,551; the average daily attendance was 18,729, and the per capita cost $95.03.

The total for instruction was $1,460,465; for operation of school plant, $206,246; for maintenance of school plant, $91,970; and for capital outlay, $41,126.

Mr. Wilson notes some interesting changes in the problems of financing the schools of the district. While the average daily attendance is steadily growing, the average wealth per child is decreasing. Thus, in 1924, the attendance was 17,780, and in 1926, it had grown to 18,815. During that same period of one year, the average wealth per child had dropped from $4,875 to $4,779. The school board during that same period, reduced the total tax from 14.2 mills to 12.76 mills. During fourteen years the average daily attendance has increased fully 37 per cent, while in the same period, the average wealth per pupil has dropped 28.7 per cent.

The bonded indebtedness of the school district is in very satisfactory condition. At the close of the year 1925 the outstanding indebtedness was $1,655,000, and this was reduced by payments amounting to $28,000 during the year 1926. In fact, the indebtedness of the Spokane school district has been steadily reduced from 1917, and since 1918 numerous bonds have been redeemed or matured. It is estimated that this policy of the board has saved the district a total of $191,721 during the past eight years.

The Spokane school district employs 729 teachers and is operating a total of seventy schoolhouses, of which twenty are portable one-room buildings. The sum of $4,580,000 is carried in insurance on the buildings and their contents. There are 30,000 volumes in the school libraries.

The school budget for 1926-1927 amounts to $1,921,506.

Schedule of Rates for Use of High School

The board of education of Mansfield, Ohio, has adopted rules to govern the policy concerning the rental of the high school and athletic field. Under the rules, a rental of $100 per evening will be exacted for the use of the auditorium by a local organization for profit; $50 for use by a local organization of worthy character; $15 for an organization using it for charitable purposes, and $15 for patriotic, political, and educational meetings not sponsored by the board of education.

The gymnasium will not be rented to any professional athletic team, but will be open to amateur organizations, such as industrial or church league teams, at a rate of $35 per night.

The swimming pool will be used solely by the school children during the day. Public use of the pool is limited to approved groups of girls or women who have obtained permission from the executive officer of the high school.

Use of the gymnasium is given to each of the three high-school classes once each year for formal social functions, each to be properly chaperoned.

The policy concerning the use of the athletic field will be decided some time in the future.

Mr. Ittner Addresses Heating and Ventilating Engineers

Mr. Wm. B. Ittner addressed the National Society of Heating and Ventilating Engineers in St. Louis on January 27th, speaking on the subject, "Heating and Ventilation of Schools from the Viewpoint of the School Architect." In his talk, Mr. Ittner emphasized the following facts:

(a) That the optimum temperature for schoolrooms must be determined by medical and educational authorities, and not by architects and engineers;

(b) That architects and engineers are prepared to meet any requirements of air conditions;

(c) That modern flexible school organization giving children an opportunity to get into play and work quarters as well as classrooms every day, constitutes an important factor in a consideration of schoolroom temperature;

(d) That reliance on "open window ventilation," irrespective of climate and locality, raises numerous problems, and among these is the problem of increased cost of buildings due to the additional cubic foot requirements for each pupil;

(e) That the "split" system of heating and ventilation is the most efficient mechanical means of air conditioning and control;

(f) That some of the trouble with mechanical heating and ventilation is due to faulty installation, but in most cases to incompetent operators.

Public Libraries and Public Schools

The close relationship between public libraries and the school system is indicated by recent statistics of the U. S. Bureau of Education on libraries. It shows, for instance, of the 5,080 libraries with 3,000 books or more which submitted data to the Bureau, that 756 are University and College libraries and 947 are in public schools or controlled by the public school officials. In addition, the 5,080 libraries have 2,844 branches, many of which were in public school buildings either for use of the pupils or for the pupils and public.

Of the 5,080 libraries, 2,788 are entirely free to the public, and 1,167 others are free for reference. The 5,080 libraries have 120,841,000 volumes, and those free to the public loaned 207,710,000 books during the year for outside use. These report that 13,756,738 persons hold borrower's cards.

These facts show the importance of the library in educational work, and the growing need of a well worked-out plan of cooperation between the library and the school system.

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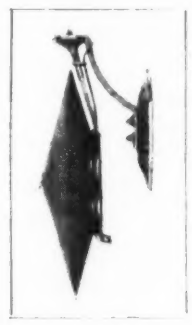

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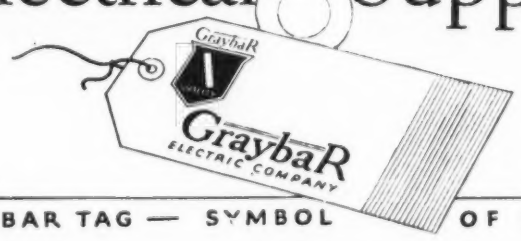

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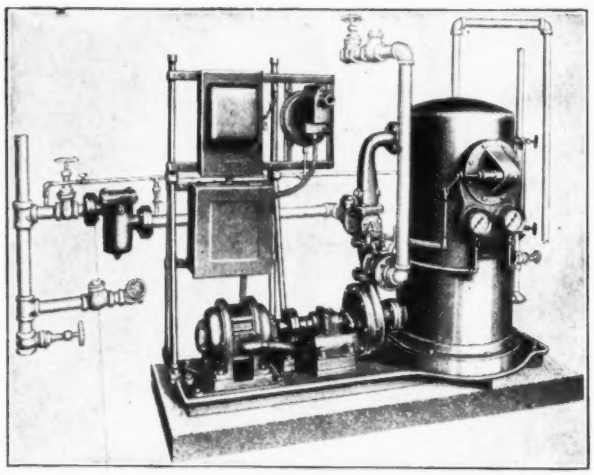
PUMPS

Supplied in Standard Units of Seven Capacities

V1 Unit equipped for automatic vacuum control, showing piping connections. Suction strainer and check valve at inlet of pump are furnished with unit, as well as companion flanges, bolts and gaskets.



They Handle Peak Loads with a Margin of Safety

THERE is never any danger of stalling a Young Pump, regardless of the amount of condensation returning from the system. Young Pumps have motors large enough to discharge water four times faster than the normal flow of condensation from a system of rated capacity. Yet there is no waste in power because the pump unloads the motor as the condensation rate decreases. **This wide margin of safety is important when handling peak loads, such as occur when steam is first turned into a cold system when the condensation rate is exceptionally heavy.**

The Young Pump, with its one moving element, creates a powerful suction on the return lines and maintains a positive pressure of twenty pounds available to discharge water to the boiler. This accounts for the marked efficiency and low power consumption of the pump.

An important Young feature is the selection of an automatic control best suited to meet the actual need of the system. Other features are simplicity of construction, accessibility, low power consumption and ease of installation.

YOUNG PUMP COMPANY

DUNHAM BUILDING
450 East Ohio Street, Chicago

Factory: Michigan City, Indiana
In Canada: C. A. Dunham Co., Ltd.
1523-41 Davenport Road, Toronto

SCHOOL ADMINISTRATION NOTES

THE STATUS OF TEACHER-CLERKS IN THE SCHOOL SYSTEM

There has been considerable discussion as to which employees of a board of education in the State of New Jersey may be legally designated as teacher-clerks. A recent number of the New Jersey Education Bulletin discusses the teacher-clerk, pointing out that the name was first given to licensed teachers employed in principals' offices, who devote part of their time to substitute teaching and the remainder to clerical work. The compound word would seem to include a dual type of work—that of a teacher and also that of a clerk. The name should be applied only to those persons who are employed as teachers and as clerks.

The attorney-general of New Jersey in defining whether the work done by an employee of a school board of education is that of a teacher says: "The type of work which a teacher is doing must be the determining factor . . . there may be teachers who do nothing but correct papers submitted by other teachers, but these persons come clearly within the meaning of the word teacher. A clerk holding a mere certificate to teach and who in fact does not teach in a school district, is not a teacher for whose service an apportionment may be made."

The school law of the state provides that a county superintendent may apportion school moneys for a teacher who actually teaches four months or more during the school year. In consideration of this, it is the opinion of the Commissioner that a person designated as teacher-clerk should be included in the following:

"1. A teacher legally certificated who actually teaches a total of four months or more and who devotes the remainder of her time to clerical work regardless of the nature of such clerical work.

"2. A teacher who devotes not less than four months of her time to clerical work generally included in the regular work of teachers, such as the correction of test papers, provided such teacher holds a valid certificate to teach the subjects she corrects."

Those who are clerks and should not be designated as teacher-clerks and for whom no apportionment may be made, and who are not eligible to membership in the teachers' pension and annuity fund are the following:

Clerks in the offices of the board of education.

Clerks in the office of the principal or superintendent who devote their time to letter writing and work which does not require a teacher's certificate.

Clerks in the attendance department of a school system.

Clerks who record the class rating of pupils and make out report cards of the pupils but do not correct the work of the pupils.

SCHOOL BOARD CONVENTIONS

The announcement that in many states school board conventions are being called is made by the United States bureau of education. Wisconsin calls county meetings of school directors which are conducted by representatives of the state department of education. In Arkansas the county superintendents have recently agreed to call such meetings. In a dozen states school board association meetings are conducted on a state-wide plan. The bureau of education in discussing the utility of such meetings says:

"Associations of school directors now found in a large number of our States are a powerful means of improving school facilities, especially in small and isolated communities. The responsibility of school directors or trustees to the children of the community is a most important one.

"The directors employ teachers, thereby determining to a great extent the kind of instruction the children receive during the school year. They have charge of the building in which the children live six hours a day, eight or nine months of the year. The school building is a comfortable, sanitary, pleasant place for children, or it is not any of these, according to the interest and responsibility directors assume toward its upkeep.

"Have the teacher and children adequate educative materials, that is, tools with which to work, that they may make the best possible use of their school days? The answer depends in a large measure on the interest and intelligence of the school directors.

"Meetings and conferences of school directors offer an opportunity for these officials to discuss matters of importance to the proper discharge of their duties. Often experts in school building plans, in lighting or ventilating schools, and the like, demonstrate good schoolroom practice in these particulars at such meetings. Sometimes the authority called upon for discussion is an educational expert, the county superintendent or an instructor from a nearby normal school or other State institution, who explains the value of modern methods of teaching and managing a school.

"Better schools are almost sure to result when the directors responsible for them become familiar with modern school ideals through directors' associations."

SCHOOL ADMINISTRATION

—The slogan "the prevention, not the cure, of failure," has been adopted by the Long Beach, Calif., school system which is under the guidance of Superintendent W. L. Stephens. Its educational program, which is one of the most outstanding in California, makes for thoroughness in every branch of study.

—The state of Wisconsin maintains 6,474 rural school districts. This is deemed a cumbersome and expensive system, and a larger unit of administration is suggested. The Milwaukee "Journal" says: "The real problem is not one of money but of organization. Wisconsin is out of date with its district system. It is still back in the middle of the last century when it refused to go to larger units of school administration. The best educational thought today favors the county as a unit, not for the purpose of taking away local independence or founding a county school autocracy, but as a means of wise administration. Cities that used to have three or four school boards have come to see that. Why cannot the counties?"

(Concluded on Page 130)

For a Healthful and Prosperous New Year 1927

In the Mill World

In the Institutional World

In the Industrial World

The WALLMARK of Quality

In the Apartment and Hotel World

GIVE Hockaday an occasional "once over" and it will greet you each morning with the cheer of cleanliness and the glow of youth. What better way of insuring health and wealth for the new year than by letting Hockaday protect your walls — and your purse?

"The job is a pride when Hockaday's applied."

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1823-1829 CARROLL AVENUE
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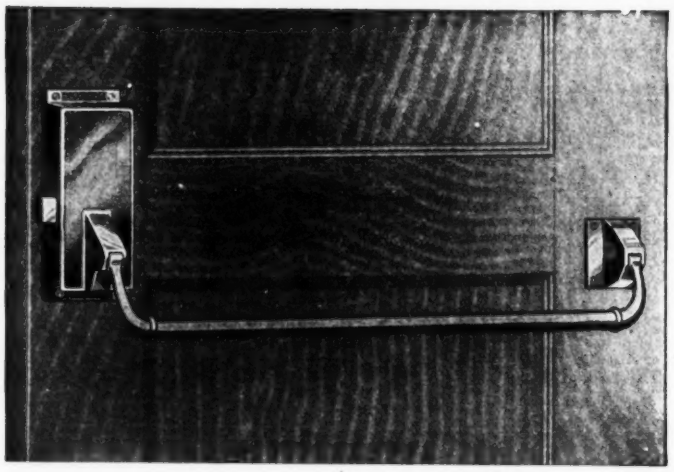
THE WASHABLE PAINT FOR ALL INTERIORS

WRITE FOR YOUR COPY OF "PAINT MILEAGE"

Smith's IMPROVED PANIC EXIT LOCKS

Smith's Improved Exit Locks are the Best Locks Made for Schools, Theatres, and Industrial Plants



Patented Dec. 1, 1925

Made in solid bronze or solid brass throughout. Exceptionally strong and simple in construction and operation.

Exit only Lock contains only 4 working parts.

Exit and entrance Lock contains 9 working parts.

Can be used on single doors or on double doors with center mullion. Size of case, 9 x 3¼ x 1½ in.

Installation made very quickly—No Mortising required.

No auxiliary bolt required, therefore no delicate movements.

Only one spring and that to eject bolt.

Positive locking feature operated with heavy gears, and not depending upon springs.

Permanent dog under cam, so constructed as to take up any wear which might occur.

Bolt projects ¾ in. from lock case, enabling bolt to have sufficient contact with strike in the event of door shrinking.

Ideal for thin as well as heavy doors.

Operates perfectly in conjunction with standard make of door closers.

Made to meet the use and abuse to which a school door lock is subjected.

NOW MADE BY **The Steffens-Amberg Co.**
Newark, New Jersey

WRITE FOR CATALOG

(Concluded from Page 128)

—A report issued by the board of education of Milwaukee, Wis., says that the teaching corps of that city consists of 2,120 persons of whom 90 are principals, 1,208 are teaching in the elementary grades, 180 in kindergartens, 408 in senior high schools, 50 in junior high schools, 104 in technical high schools, 71 in manual training and domestic arts, 6 are home visiting teachers, and three teachers for children of defective speech. The administrative department consists of a superintendent, five assistant superintendents, a supervisor of music and his eight assistants, a drawing supervisor and four assistants, a physical education supervisor and two assistants, and special supervisors in charge of household arts, handwriting, primary projects, special classes, and welfare.

—By authority of the school board, Dr. Lucy L. W. Wilson, principal of the high school at South Philadelphia, Pa., eliminates girls 16 years old who have failed to complete a six months' course in one year.

—W. M. Davidson, superintendent of the Pittsburgh, Pa., schools in a recent public address stated that there are in this country 3,850,000 illiterates, 700,000 adults not naturalized, 300,000 children in public high schools, and 600,000 children in their teens not in any school. Pennsylvania has 162,000 foreigners who cannot read or write the English language and 50,000 native-born illiterates.

—"A system of schools ministering to 160,000 different individuals requiring 4,000 teachers and administrative officers, offering courses, classes and other educational opportunities by the score, and housed in hundreds of school buildings must be thoroughly organized in order that its work may be carried on smoothly and effectively," says Jeremiah E. Burke, superintendent of the Boston, Mass., schools in his annual report. "Furthermore, the machinery must be carefully inspected at regular and frequent intervals, new devices introduced and modifications made at one point and another in the interests of economy of time and energy, improvement of the quality of the output and increase of productivity."

—Glendale, Calif. A loose-leaf record of pupil's work has been in operation during the past year. This record, together with the results of standard tests, is filed under the pupil's name, and forms a valuable record of the pupil's work which is cumulative from year to year.

—Glendale, Calif. A schedule of interclass games for all grades has been placed in operation for the graded schools. Under the system, a major portion of the pupils, both boys and girls, take part in competitive games. The school has 23 acres of school grounds.

—Supt. W. D. Johnston, of Weirton, W. Va., in a special circular, calls attention to the problem of keeping pupils in school for a longer period. He deplores the fact that boys and girls so often leave school as soon as they have satisfied the requirements of law in order to enter some line of work. As a result, the higher grades and the high school have a low percentage of the total enrollment. Mr. Johnston urges that teachers impress upon their pupils the necessity of remaining in school until a high-school education is obtained.

—The Idaho Teachers' Association held a successful meeting December 28-31, at Boise. Dr. Thomas Hopkins, of the University of Colorado, and Dr. Sisson, of Reed College, were the principal speakers. The Association adopted a report of the Committee on Reorganization. The name of the association was changed to Idaho Educational Association.

NEWS OF SCHOOL OFFICIALS

—Mr. William S. Beaupre, secretary of the east side board of Aurora, Ill., has resigned after 41 years of service. Mr. Beaupre will retain his membership on the board with which he has been associated for 48 years. He was elected to the board in 1879 and installed as secretary in 1885.

Miss Virginia Watson, a bookkeeper in the office of the board, has been appointed as secretary to succeed Mr. Beaupre.

—Mr. James J. Crosby, a former superintendent of schools at Peoria, Ill., has been elected secretary of the board of education, to succeed the late U. J. Albertsen.

—Mr. C. E. Loertz has been elected a member of the school board at Seymour, Ind., succeeding Mr. S. A. Barnes. The board has been reorganized with Mr. G. C. Borcherding as president, Mr. C. E. Loertz as secretary, and Mr. Henry Roegge as treasurer.

—Mr. Ralph A. Bowman, district clerk of the Middletown Township, (N. J.) schools, died at Red Bank, December 18, after an illness of ten days. Mr. Bowman was secretary and advertising manager of the Monmouth County School Journal. Mr. Wm. M. Petingale has been appointed to succeed Mr. Bowman as district clerk.

—Miss Clementine Hampton, who died recently at Hilliard, Florida, was a nationally known woman. For several years Miss Hampton attended the summer and winter meetings of the National Education Association. On more than one occasion, she had a large supply of Florida oranges and grapefruit at the Florida headquarters for those who attended the meetings. She was prominent in political affairs in her state and was especially active in educational affairs.

—Mr. Frank Irving Cooper, of Boston, Mass., has been appointed a member of the building committee of the National Association for the Study of the Platoon or Work-Study-Play School Organization. Mr. C. B. Glenn of Birmingham, Ala., is chairman of the committee, and Mr. I. O. Winslow, of Providence, is a member.

—Mr. James Wingate has been employed as director of motion pictures for the state of New York, at a salary of $7,500. Mr. Wingate was formerly a district superintendent in Schenectady County and entered the department of education in 1919 upon his appointment as assistant elementary schools commissioner.

—Joel N. Pierce, who served as superintendent of Greene County, Tennessee, for fourteen years retired with the beginning of the year.

—James G. Farce, superintendent of Monterey County, was elected president of the central coast section of the California State Teachers' Association, and J. H. Graves, superintendent of the Monterey city schools, was elected treasurer. Other officers chosen were: Vice-president, James P. Davis, principal San Benito Union High School; secretary, T. S. MacQuiddy, superintendent of Watsonville city schools; and Council Representative, Katherine U. Gray, superintendent of San Benito county schools.

Overbrook High School, Philadelphia. J. D. Cassell, Superintendent of Construction for the Philadelphia School Board. Irwin T. Catherine, Architect.

Par-Lock used on all exposed concrete surfaces that were plastered, for damp-proofing and to supplant furring of the surfaces of brick walls. Par-Lock waterproofing and damp-proofing used in other parts of the building. Applied by the Par-Lock Appliers of Philadelphia.

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Brick or other masonry
Plus a gun-driven asphalt coat
Plus an imbedded coating of grit
Makes the Par-Lock base, ideal for plastering

PAR-LOCK is a damp-proofing treatment combined with a plaster key, for interior walls and ceilings. It is an especially satisfactory treatment to specify because it is furnished and applied by applying concerns in several districts, each of which takes full responsibility for material and workmanship.

For interior surfaces of exterior walls, Par-Lock effectively excludes moisture. It prevents condensation by checking convection air which is the vehicle of chill. As a ceiling application it protects against stain. In any situation it is a safeguard against plaster separation,

The investment of money, of effort, of reputation that goes into any large structure is insured against humiliating loss, when that most vulnerable point—the plastered surface—is preserved by Par-Lock. The nearest applier will gladly furnish data and quotations.

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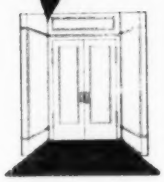
P-6

Check Up on your Mat Needs Now



Wear Proof Mats COST LESS—
They NEVER Wear Out—
The first cost is the LAST cost—
Have GREATER scraping surface—
Clean the feet BETTER—
EASIER to clean and handle—
Roll up like a rug—
ALWAYS lay flat and STAY flat—
More SANITARY—germ and waterproof—
Trap the dirt—Keep it from spreading—
End your mat troubles and expense.

Adopted and used in over 50,000 of the best buildings, hotels, theatres, stores, banks, hospitals, schools and factories in the U. S.

Built in link form of steel and asphalt impregnated wool felt, they are absolutely waterproof, which prevents them from becoming slippery and eliminates the possibility of accident. They lay flat without creep or crawl, and will not warp, buckle or slip. They present a comfortable, sure-footed, safe-tread—and "They Never Wear Out."

Approved by the safety engineers of such well known concerns as the Eastman Kodak Company, these everlasting mats are protecting floors and protecting employees for untold numbers of similar manufacturers.

Ask us to show you how Wear Proof Mats will save you money, give you better, safer mats and everlasting mat service. Our Wear Proof Book, containing complete information and prices, will be sent free on request. Use the coupon.

WEAR PROOF MAT CO.
CHICAGO, ILL.

WEAR PROOF MATS
NEVER WEAR OUT

They Never Wear Out

CHECK Your Mat Needs Here

- ☐ Entrances
- ☐ Stairs
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WEAR PROOF MAT CO.
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Gentlemen:

Please send me your Free Book which shows how **Wear Proof Mats** will save me money and end my mat expense forever.

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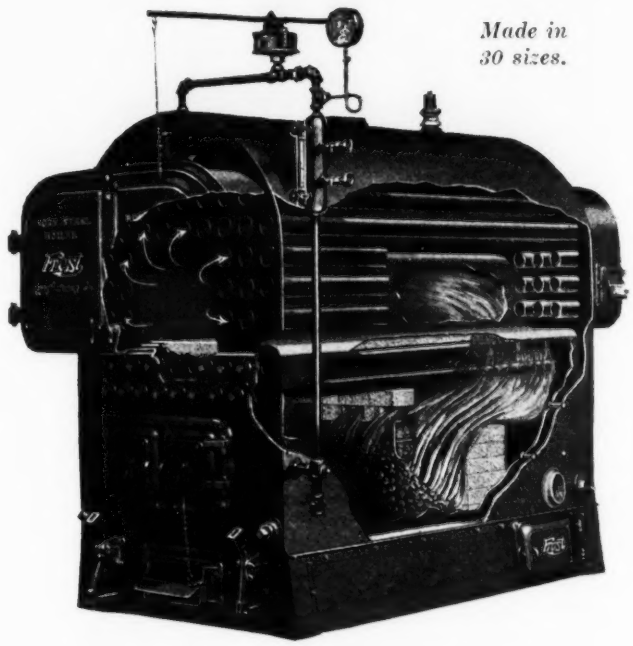


Made in 30 sizes.

Excess Warm Pure Air or Epidemics

The quick spread of school epidemics is usually traceable to inadequate ventilation because of lack of a dependable supply of heat.

The School Board which looks conscientiously to every detail of ventilation or equipment spends much careful thought on the purchase of the proper heating plant.

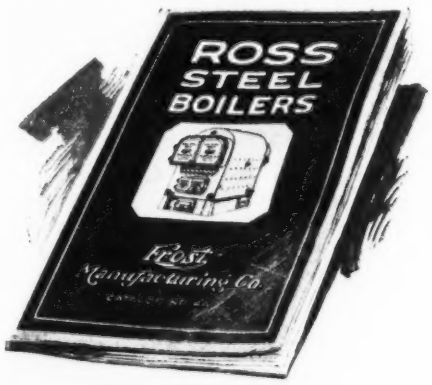
Let us refer you to notable installations.

ROSS Boilers

are deserving of the name "The Schoolhouse Boiler." No house of learning is too large for their capacities or too small to be heated economically.

There are many patented features which insure a steady, even flow of heat from low grade coal or oil with little stoking attention.

The extreme care of manufacture allows for the most rigid of city or state inspection and the price is unusually low for this high quality product.



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RIGID AND SAFE
A five year guarantee insures against replacement.

PROVIDE COMFORTABLE SEATING

Economical – Light in Weight – Compact

BEACON CHAIRS are economical because of their durability and the innumerable points of superiority. They cost less than other folding chairs of the better grades.

Beacon Chairs are light in weight, weighing less than 10 lbs. They can be carried from room to room without any trouble. Beacon Chairs fold flat to a thickness of 1⅜" and are easily stacked. Setting up and folding is so simple that any small child can do the work easily.

Their comfort makes better students, their quietness aids classroom efficiency, their sturdiness insures against replacements.

Easy to Fold

Send for a Sample ☛

Let us send you a sample for a 10-day test. For your convenience in specifying style and color, pin the coupon to your letterhead.

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Please send a Beacon Chair on 10-day approval, subject to return for full credit if it does not prove entirely satisfactory.

COLOR	STYLE
☐ Brown	☐ Wood Seat and Wood Back
☐ Mahogany	☐ Upholstered Seat and Wood Back
☐ Battleship Gray	☐ Upholstered Seat and Upholstered Back
☐ Olive Green	

Name .....

Address .....

City and State.....

SCHOOL HOUSEKEEPING

(Continued from Page 46)

holds a strip of lamb's wool in place. This strip, which is removable, will give longer and better service if it is washed out in warm soap suds after each day's work. Another good reason for keeping the lamb's wool clean is to rid the mop of any cutting fragments, such as sand, etc., which may have been picked up during the day's work. Lamb's wool strips are a standard article and should be made a part of the janitor's supplies so that worn out strips may be discarded for new ones as needed. They are inexpensive.

Spreading wax with a mop eliminates stooping and soiling the hands. The second illustration shows the janitor preserving the floor with paste wax and in the proper posture for doing the greatest amount of work with the least exertion.

Driving in the Wax

Wax should be driven into the very pores of the wood when preserving the floor. Waxed floors are not slippery when this is done. Slipperiness is caused by the failure of hand rubbing to effectively "burn" the wax into the wood. Electrical waxing machines are now on the market and the illustration shows one of the heavier models being used to drive the freshly spread wax into the open pores of a newly scrubbed maple floor.

Burnishing the Waxed Floor

Waxed surfaces will take on a lustrous appearance wherever there is traffic, without any more friction than is furnished by the children and teachers in walking upon it. This can be demonstrated by applying a little paste wax to a clean spot on a floor and rubbing it briskly with the soles of your shoes.

However, in order to gain the desired finish which is glossy, hard, and of uniform color and appearance throughout, the electric waxing machine is again used to supersede the old hand method of the weighted brush.

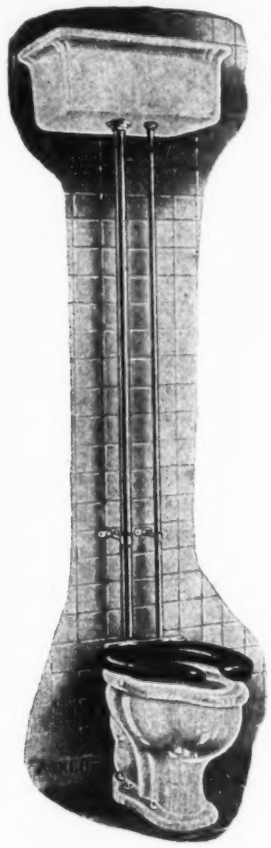
(The third article discusses the Maintenance of Floors.)

FIGURE 3.

FIGURE 4.

THE NAME TO LOOK FOR ON PLUMBING WARE

"PLUMBERS NONCO BRASS"



"NONCO"

AUTOMATIC SEAT ACTION CLOSET No. 4785-N

Especially Desirable for Schools and Public Institutions Where Only a Moderate or Low Water Pressure Is Available

"NONCO" Plumbing Fixtures are completely in accord with the present tendency towards the best possible in school house construction and equipment. Their remarkable long life and uninterrupted service afford a definite factor of economy that make them a logical — yes, and a dependable choice for school installation.

"NONCO" experts are **always at your service,** ready and willing to offer suggestions on any and all your plumbing problems.

N. O. NELSON MFG. CO.

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Salt Lake City, Utah

PROS AND CONS OF SCHOOL VENTILATION

(Continued from Page 50)

It is unfortunate, indeed, that persons of more or less prominence in their own fields have dabbled with a subject in which they have no experience and have arrived at conclusions based on incomplete experiments of a laboratory character. It is doubly serious in that they seem to be in a position, by virtue of their prominence, to be able to go into a school, put a board in front of a window, a large vent flue in the back of the room, and say to the world, "We have discovered the panacea of all school ventilation ills." Not satisfied with this they immediately put under way a project to repeal all state laws conflicting with their ideas!

Position of New York Commission

It is well to note before passing that the New York State Commission on Ventilation has never taken such a stand. They state as a fact that window ventilation is unsuited for auditoriums and only think it *might* do in classrooms under proper conditions, if the rooms are on the side toward the prevailing winds. Sounds somewhat different, doesn't it?

It is quite possible that the window-ventilation advocates have allowed themselves to be misled by an atmospheric peculiarity which is of common knowledge. It is well-known that everyone feels more "peppy" to get out on a cold snappy autumn morning, and that a brisk walk and rosy cheeks result. A mild morning, just after a shower in the spring, does not have the same stimulating effect of "crispness" as with the colder temperature. Neither does it have the winter dryness. With window ventilation, cool draughts from imperfect mixing of the incoming air with the warmer room air are almost unavoidable; of course, the lack of a humidifying system results in an unusually dry condition of the air. Thus, window ventilation is found to produce a condition approximating the crisp, cold morning conditions.

Fan-and-duct ventilation, with humidifying and air washing devices, produces conditions more nearly approximate to a mild spring morning with its balmy air of higher humidity. If the cold, crisp, and dry conditions are more beneficial to study why not make open-air schools or "preventoriums" as they are sometimes called; let the children wear coats and gloves, and save *all* the money spent on both heat and ventilation? If such a condition is not the most healthy, stimulating, and generally desirable, if the balmy spring morning is the ideal condition, then the argument for window ventilation falls to the ground without a single thing to recommend it.

Even the factor of cheapness must be taken with a grain of salt. This is really something that should not be considered, for our school children are entitled to the best conditions—not the cheapest. Still, as a talking point, it sounds convincing until it is considered that the persons preaching the cheapness of window ventilation are singularly quiet in calling attention to the fact that it is necessary to double the radiation, increase room areas from thirty per cent to sixty per cent, more than double the size of vent flues and registers, provide radiator shields and deflectors, double the capacities of the piping to take care of the increased radiation, use rooms on the sides of prevailing winds, and then burn the same amount of coal for equal heat and air supply as with the fan-and-duct installations. Nor do they bring out that humidity is entirely lost and that air quantity and temperature is wholly dependent on the individual teacher in each room.

Recirculation and Not Retrogression

Another point which raises grave doubts in common-sense minds regarding window ventilation is the fact that it has been urged for schools *only*. Why? Aside from a few special problems arising from the way the school buildings are used there is little difference in the actual ventilating requirements, or the method of ventilating, as compared with other buildings in which a large number of persons are congregated, such as theaters, stores, and workshops. Window ventilation is never suggested for such conditions. Why? Listen to what Howard E. Lovett, engineering head of La Salle and Koch Co., of the R. H. Macy chain stores says regarding the subject of ventilation in their Toledo store:

"Twenty-four million cubic feet or 800 tons of scientifically conditioned air are blown every hour into this store to keep it healthful, *but this is typical of modern metropolitan stores elsewhere.* Six million cubic feet are used on the first floor alone. Old air is drawn from every room and floor and fresh air, taken from the roof of the building and washed, tempered, and humidified, is blown in from other ducts or registers.

"Eight sets of air-conditioning apparatus are used to cleanse the air of dirt and dust particles. The air is first blown into a fine spray of water. It is then blown through steel shavings saturated with oil, to remove any dirt which escaped the water. The air is temperatured by the water through which it is blown.

"Air motion, temperature, and humidity play a large part in the mechanical and manufacturing phases of operating any big store.

"In the store's hospital, where an average of 1,500 cases are handled each month, ranging from births to deaths, air conditioning plays a big part. It is here that careful ventilation of the cleanest type is vital."

Mr. Lovett predicted that, within a few years, every modern department store in the United

(Concluded on Page 136)

6700 Universal Heating and Ventilating Units in Satisfactory Operation

Sixty-seven hundred installations of the Universal Heating and Ventilating Unit are providing these four advantages: 1—Effective control of temperature, 2—Reliability, 3—Simplicity, 4—Economy.

The Universal Heating and Ventilating Unit is a tried and proven product. It has been manufactured by John J. Nesbitt, Inc., for the past 13 years and has been installed with satisfactory results in schools and other public buildings all over the country.

Universal Heating and Ventilating Units are handled as a part of the American Blower line—are backed by the American Blower resources and reputation—are sold through the nation-wide sales and engineering organization of the American Blower Company.

Write for complete technical data, prices, etc.

AMERICAN BLOWER COMPANY, DETROIT, MICH.
BRANCH OFFICES IN ALL PRINCIPAL CITIES
CANADIAN SIROCCO COMPANY LIMITED WINDSOR ONTARIO

524

American Blower

"Sirocco" TRADE MARK VENTILATING, HEATING, AIR CONDITIONING, DRYING, MECHANICAL DRAFT

MANUFACTURERS OF ALL TYPES OF AIR HANDLING EQUIPMENT SINCE 1881

At What Price Progress?

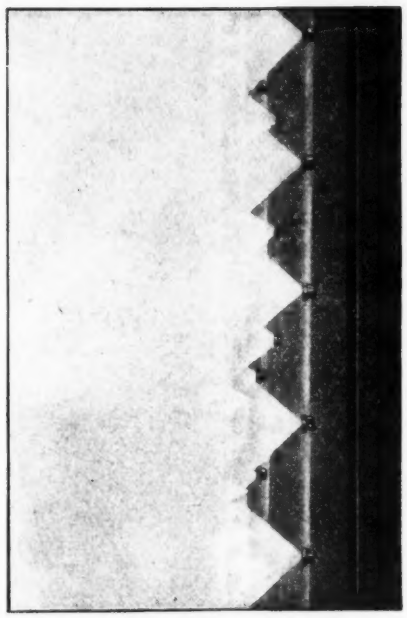
REAL progress can come only when teachers and pupils are given the right working conditions for the intensive study demanded in modern curricula. There is no substitute for clean, pure air properly tempered and humidified.

Carrier Air Washers actually WASH the air, first passing it through the finely atomized mist from the Carrier Spray Nozzles to saturate the dirt and dust particles, then against baffle plates which scrub away the suspended impurities. The air emerges fresh, clean, pure — at the correct temperature and humidity. The results are evident in improved attendance and better scholarship.

Write for information on Buffalo-Carrier air conditioning, heating and ventilating.

CARRIER AIR CONDITIONING COMPANY OF AMERICA

186 Mortimer St. **Buffalo, N. Y.**



Carrier Spray Nozzles break the water into a perfectly atomized mist which thoroughly mixes with the air, saturating and removing dirt and dust particles. Note that there are enough nozzles to reach all portions of the air.

(Concluded from Page 134)

States would have similar equipment, while every public school, industrial plant, and public building would contain proper air conditioning apparatus for health protection.

Like all novelties which promise great things a large number of persons can be "sold" on an idea, only to find when it is put into practical operation, that they really have been "sold" but not in the manner they expected.

In closing it is fair to state that judging by progress, not only in ventilation and humidity, but in air cooling as well, which is being rapidly installed in such buildings as theaters, manufacturing plants, and other public buildings, there is no indication of retrogression in this field. On the contrary, the use of schools as community centers, the possibility of summer sessions in the near future, and a growing tendency to produce ventilation systems of high character and automatically operated, all indicate a future when the best types of schools will compare with the best types of other buildings. Recirculation, and not retrogression, is going to be the big step in the direction of economy in operation.

THE WINFIELD SALARY SCHEDULE

(Continued from Page 53)

of the North Central Association and the State Board of Education.

(b) Three years of successful experience under favorable educational conditions.

(c) Minimum salary $1,320
Standard salary..... 1,440
Maximum salary..... 1,710

8. Above are the general standards as established for each class of teachers. The minimum salary is suggested for those who are considerably below the standards here established.

Then there must be this principle of flexibility to take care of people who will be much above the standard in one or more items but below in some others. The standards represent the desired minimum qualifications for each group of teachers. It may take a few years to attain these standards.

9. Those teachers in the junior high school who have not yet secured the baccalaureate degree shall be considered as special teachers under the provisions of paragraph three. Teachers holding the Master's degree who are assigned to work where this degree means special proficiency may be given consideration under paragraphs three or five.

10. Provision is made for annual salary increments under the following conditions:

(1) **Teachers of A or B rating are to receive an annual increase of fifty dollars per year until the maximum is reached, provided that the requirements of the schedule are met.**

The Board of Education may grant fractional or additional increments to teachers with an A rating above this schedule.

(2) **Teachers of a C rating who meet the other requirements of the schedule are to receive an annual increase of twenty-five dollars per year until the maximum is reached.**

(3) **Teachers with a D rating are not to receive an increase of pay. Teachers with an F rating are not to be retained.**

(4) **In order to continuously receive the salary increments as scheduled, a teacher must be making professional advancement sufficient to assure a year of college or university credit in advance of the standard by the time the maximum is reached. (Attention is called to the fact that ratings above F are of successful teachers.)**

11. Some principles in rating teachers:

(1) **Teachers shall be classified by the supervisors and administrators into the following groups: F—Failing, D—Improving, C—Standard, B—Approved, A—Superior.**

(2) **A failing teacher will not be re-employed.**

(3) **An improving teacher has these characteristics:**
- **a. A tendency to overcome present deficiencies.**
- **b. Her weaknesses, whether due to unusual circumstances, misfortune, or improper development, may be overcome.**
- **c. Some one or more factors tend to hold below a C rating.**
- **d. Retention is based upon a cheerful, cooperative, and consistent attempt at improvement.**

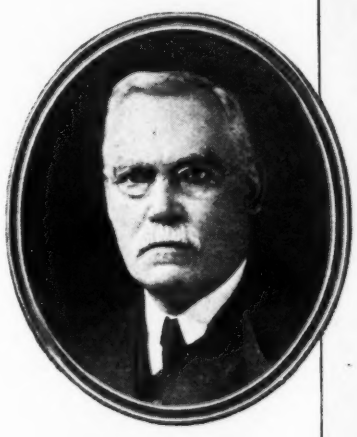
(4) **A standard teacher secures positive results and shows these characteristics:**
- **a. She secures the confidence of pupils, fellow-teachers, supervisors, and patrons.**
- **b. Her pupils are making the expected progress. Her classroom is attractive and wholesome. Citizenship, health, and character are stimulated.**
- **c. This teacher is always cooperative, follows instructions well, and is thoroughly dependable. She meets parents well and knows the home conditions of her pupils.**
- **d. A teacher of this rating will be making academic advancement.**
- **e. Ratings of B and A.**

Ratings in advance of the C rating shall be given in recognition of superior work to a limited number of teachers. In addition to satisfying all the requirements of the C teacher, an instructor must carry unusual responsibility, render an excellent quality of service, or make an unusual contribution in some manner to qualify for this rating.

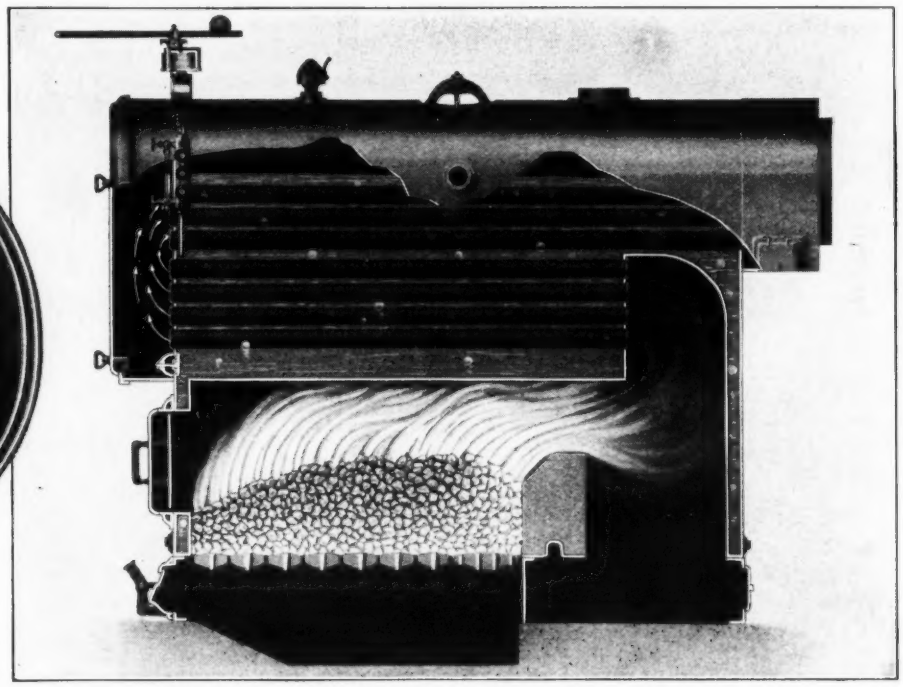
Some Interpretations and Suggestions

1. It is understood that the adoption of a salary schedule will not constitute cause for reduction of any present salaries. This represents an attempt to standardize our practices and our progress. Those who are now teaching

(Concluded on Page 138)



JAMES G. HEGGIE
who in 1892 founded the Heggie Organization and today is President of the Heggie-Simplex Boiler Co.



Heating Boiler Design Culminates in "Heggie-Simplex"

IN Heggie's 35 years of boiler manufacturing, boiler design has undergone an evolution, advancing from that of the early, cumbersome types up to the perfected "Heggie-Simplex" self-contained unit.

The "Heggie-Simplex" is the most modern heating boiler of today. Every feature has a scientific reason and furnishes definite advantages. It embodies all the desirable points which earlier types partially afforded, without any of their drawbacks. It provides the essentials necessary to the economical production of heat—in a boiler of the utmost simplicity.

The "Heggie-Simplex" is not only the ultimate in design but "The Quality Boiler of the Market" as well. Made of the finest materials money can buy, fabricated with painstaking care—built as you would expect of "Heggie." Heggie-Simplex Boiler Company, Joliet, Ill. *(Representatives in principal cities—'phone, address, listed under "Heggie-Simplex Boiler Co.")*

HEGGIE-SIMPLEX
ELECTRIC-WELDED STEEL HEATING BOILERS

"Van" Cafeteria Equipment
of
"That Enduring Quality"
FOR dependability, sturdiness and perpetual economy, you will hardly find the equal of Van Cafeteria Equipment. Users will tell you this —and more.
The first cost is the last cost with Van Equipment. That is why it pays to specify it in the beginning. If you are contemplating a new Cafeteria, start right and stay right with Van Equipment.
Our Catalog will be sent promptly if you wish it. Ask for it without obligation.
Can we help you with your plans? Consult us for full information on planning and equipment.
The John Van Range Co.
EQUIPMENT FOR THE PREPARATION AND SERVING OF FOOD
Cincinnati
NEW ORLEANS
CLEVELAND
ATLANTA
DETROIT
CHICAGO
LOUISVILLE

(Concluded from Page 136)

in the system who are not up to the standards here set forth are not, therefore, to be displaced but are rather urged and encouraged to make all possible progress in meeting the standards.

2. There is one thought throughout which is that we should do the best we can for the teachers in the Winfield schools in the hope that this will mean better things for the children of Winfield.

IOWA'S NEW UNIFORM SCHOOL ACCOUNTING SYSTEM

(Concluded from Page 56)

the budget for the coming year is taken up. If any variance is decided upon by the board as opposed to the suggestions of the superintendent and secretary or board finance committee, then the board makes such changes at this meeting and proceeds to adopt the revised budget.

When this is adopted then, according to the Iowa law, the totals of the decided appropriation are recorded and published in a local newspaper which announces the date of a meeting when the board will sit for public hearing of objections from taxpayers. If there is no objection, as is usually the case, then at the meeting for the hearing, after the required time has elapsed, the board makes a certificate of the appropriation decided at the hearing. This is usually the same as originally decided upon by the board, and this certificate is sent to the County Auditor of the county in which the school district lies. The auditor thereupon arrives at the millage of tax necessary and then forwards the copies to the Director of the Budget for acceptance or rejection. The auditors are so trained that they usually catch any sort of irregularity that may appear, so rather few difficulties are experienced in the budget department office except that it might be a higher millage than the law permits.

(Concluded on Page 140)

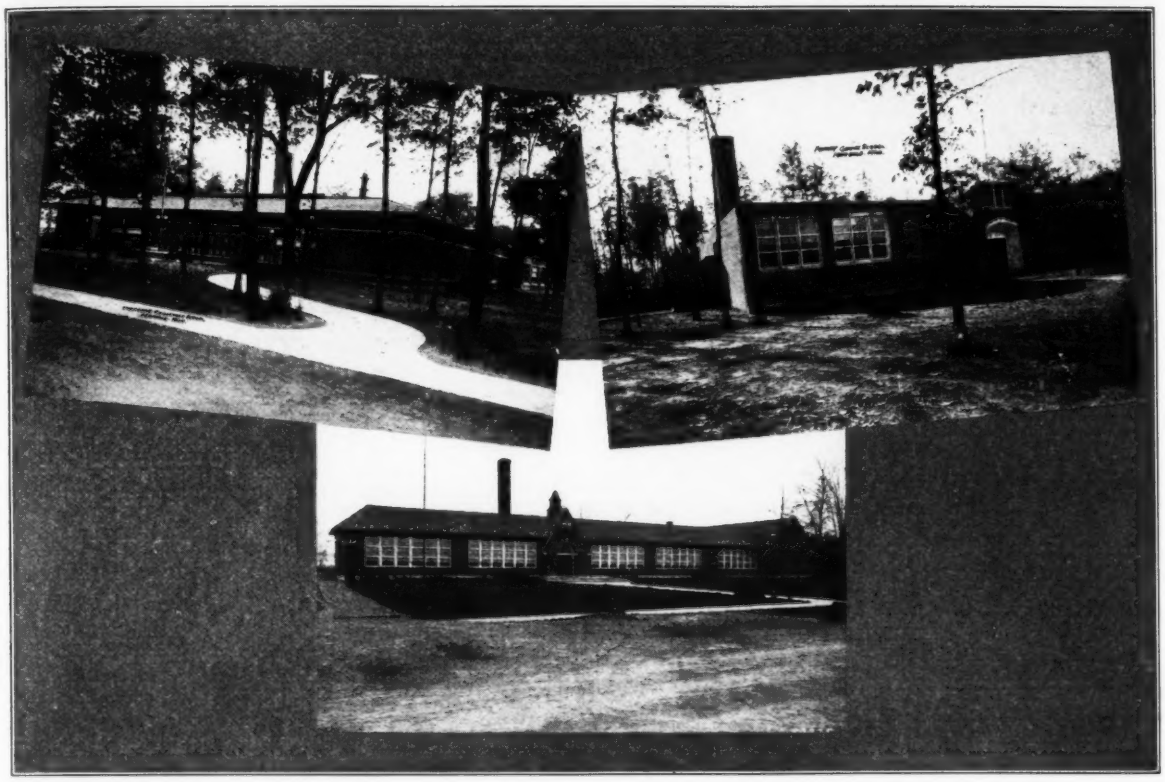
Form..... **IOWA UNIFORM SCHOOL ACCOUNTING SYSTEM**
INTERNAL BUDGET FOR SCHOOLS
(For record only, not to be published)

.....Date .....District.....County.
Name of President of Board.....Secretary .....
.....

EXPENDITURES
(General Fund)

	Actual 192....	Estimated 192....
ADMINISTRATION.		
1. Secretary's Salary		
2. Secretary and all board supplies		
3. Superintendent office supplies and postage		
4. Telephone and telegraph		
5. All clerical service		
6.		
TOTAL ADMINISTRATION	$	$
INSTRUCTION.		
1. Male teacher salary		
2. Female teacher salary		
3. All instruction supplies		
4. Supplementary and library books		
5. Commencements, exhibits, etc		
6. Free textbooks		
7.		
TOTAL INSTRUCTION	$	$
OPERATION.		
1. Janitor salary and extra labor		
2. Janitor supplies		
3. Fuel		
4. Light and power		
5. Water		
6. Freight, express and drayage		
7.		
TOTAL OPERATION	$	$
MAINTENANCE.		
1. Repair of buildings		
2. Upkeep of grounds		
3. Repair and replacement of furniture		
4. Repair and replacement of service systems		
5.		
6.		
TOTAL MAINTENANCE	$	$
COORDINATE AND AUXILIARY ACTIVITIES.		
1. Medical and dental inspection—nurse service		
2. Compulsory attendance enforcement		
3. Athletics and forensics		
4. Books and supplies for re-sale		
5. Garden, playground, etc		
6.		
7. A. Drivers' salaries		
B.		
C.		
TOTAL COORDINATE AND AUXILIARY	$	$
FIXED CHARGES.		
1. Rents		
2. Insurance		
3. Taxes		
4. Contingencies		
TOTAL FIXED CHARGES	$	$
CAPITAL OUTLAY.		
1. Alteration of old buildings		
2. New heating, lighting, plumbing, etc		
3. New furniture		

Heatovent *The* Unit System *of* Heating *and* Ventilating



ARCHITECT:
H. T. KEYES,
DETROIT, MICH.

MECHANICAL ENGINEER:
RAY S. WILDE,
DETROIT, MICH.

OWNER:
BOARD OF EDUCATION,
SCHOOL DISTRICT No. 9,
ROYAL OAK TWP., MICH.

BUILDINGS:
THEODORE ROOSEVELT SCHOOL,
FOREST GROVE SCHOOL,
WOODROW WILSON SCHOOL.

HEATING CONTRACTORS:
MAIN PLBG. & HTG. CO.,
ROYAL OAK, MICH.
EAMES & BROWN,
PONTIAC, MICH.

Ferndale is Justly Proud of These New Schools Equipped with Heatovents

THIS progressive Board of Education made a very thorough investigation of the merits of the various heating and ventilating systems now being used in School Buildings, and, as a result, adopted the Unit System as superior to all others. The same care and thought governed their selection of the units for these three buildings.

Every School Board should investigate the Heating and Ventilating equipment for their new buildings, as this equipment is of prime importance to the health, welfare and comfort of the children. In fact, the Heating and Ventilating System is really the Heart of the School Building.

All Heatovents are fully guaranteed to give the desired results and are backed by our fifty (50) years experience in the proper method of heating and ventilating School Buildings.

THE BUCKEYE BLOWER CO.
COLUMBUS, OHIO

BRANCH OFFICES:

254 Peachtree St., Atlanta, Ga.
2126 Edmondson Ave., Baltimore, Md.
321 Jackson Bldg., Buffalo ,N. Y.
301 Rose Building, Cleveland, Ohio.
401 Transportation Bldg., Chicago, Ill.
1226 California St., Denver, Colo.
3115 N. Central Ave., Indianapolis, Ind.
1011 Pioneer Trust Co. Bldg., Kansas City, Mo.
400 Penobscot Bldg., Detroit, Mich.
1400 Broadway, New York, N. Y.
403 Military Park Bldg., Newark, N. J.
416 Essex Bldg., Minneapolis, Minn.
709 Columbia Bank Building, Pittsburgh, Pa.
Fals Building, Seattle, Washington.
307 Union Bldg., Syracuse, N. Y.
1101 Realty Building, Youngstown, Ohio.

The Best System *For* Schools Heatovent

IOWA'S NEW UNIFORM SCHOOL ACCOUNTING SYSTEM

(Concluded from Page 138)

It may be seen now why we have said that the budget is the last part of school finances rather than the first. A base has been built by the accounting system, and the final result has been the internal budget which has led up to the final certified budget.

The internal budget is so arranged that balances are considered. Also, it is so arranged that all expenditures of each fund are recorded and totaled first. Then all revenue except that from tax levy is recorded and totaled. Then it is easy to see that the difference between the revenue (except the tax levy) and the estimated expenditures is the exact amount necessary to be levied for taxes for the coming year in each fund.

The internal budget, the form in which board of education members are most interested, presents the clearest picture of school district finances that any arrangement has ever done in the state of Iowa.

In a school system having more than one building, one internal budget form may be used for each building, excluding the general items that apply to the whole district, and then a final summary may be made on one of the same sheets, showing the total of the district. This is very convenient when a board requires information concerning the separate buildings of the system. Such arrangement is optional, however.

The Iowa Uniform School Accounting System is simple enough for practically all school secretaries to handle without difficulty. The use of the system will become easier with each passing year of its use.

The internal budget will become increasingly more valuable each year that it is used, and the object of budgeting will be more closely reached each year that the internal budget operates.

The general outline of the Iowa Uniform School Accounting system will not change for years to come, it is likely. Minor changes, however, may become necessary from time to time due to legislation or due to some unforeseen cause.

What the Iowa school accounting system is accomplishing is no more than private business accomplished decades ago. The principles of uniform standardized accounting can and are being constantly applied to public as well as private organizations and, pertinent to our discussion, it may be said that we still have to see fail any solid attempt at uniform financial procedure.

PIONEER SUPERINTENDENTS

A recent study of early school superintendencies shows that Nathan Bishop was the first full-time professional superintendent of schools in America, his service beginning in Providence, R. I., in 1839.

In Buffalo, N. Y., a superintendent was chosen in 1837, when the New York legislature passed an act incorporating the city of Buffalo, and providing for a superintendent of the common schools. The first Buffalo superintendent was R. W. Haskins, appointed in 1837, who was succeeded the next year by O. G. Steele.

Louisville, Lexington, and Maysville, Ky., each had an agent of the public schools in 1838.

St. Louis had a superintendent in 1839 in the person of George H. Budd. Henry Pearson was superintendent and secretary in 1841-42, and a similar title was held by E. M. Avery in 1848-49.

A superintendent was employed in Cambridge, Mass., as early as 1836, but no claim was made that he was more than an acting school visitor.

Samuel S. Green seems to have been the second professional superintendent. From the principal of an academy at Worcester, he became superintendent at Springfield, Mass., in 1840. After serving as an agent of the State Board of Education of Massachusetts, he resigned to succeed Nathan Bishop as superintendent at Providence.

4. New instruction apparatus and equipment.....
5. .....
6. .....

TOTAL CAPITAL OUTLAY..... $ $

RESERVED FOR UNFORESEEN EXPENDITURES.....
(Just enough to meet unexpected expenditures in any department.) Enter only in Column 2.

GRAND TOTAL OF EXPENDITURES. (General Fund)..... $ $
(Show total actual expenditures in Column 1 and total estimated expenditures in Column 2.)

BALANCE ON HAND as of June 30. (General Fund).....
(Enter actual balance for year just ended in Column 1 and estimated balance at close of ensuing year in Column 2.)

(X) TOTAL EXPENDITURES PLUS BALANCE ON HAND. (General Fund)..... $ $

GENERAL FUND
(Receipts)

FEDERAL AND STATE AID.
1. Normal Training .....
2. Consolidated school .....
3. Smith-Hughes .....

LOCAL REVENUE.
1. Semi-annual apportionment .....
*
3. Tuition .....
4. Interest on daily bank balance.....
5. Income from property.....
6. .....
7. .....

TOTAL RECEIPTS FROM SOURCES OTHER THAN TAXATION..... $ $

BALANCE ON HAND JULY 1, 192....(Beginning of year just ended. Enter in Column 1.)
BALANCE ON HAND JULY 1, 192....(Beginning of ensuing year. Enter in Column 2.)

TOTAL RECEIPTS FROM OTHER SOURCES PLUS BALANCE ON HAND..... $ $

*2. DISTRICT TAX (Tax levy for General Fund).....
(Enter in Column 1 actual amount of district tax received during the past fiscal year and in Column 2 estimated amount necessary for ensuing year. This amount may be determined by deducting the total receipts from other sources plus balance on hand (Column 2) from total estimated expenditures plus balance (Column 2) and will be the exact amount needed to balance estimated receipts column with estimates expenditure column.)

GRAND TOTAL OF RECEIPTS, INCLUDING BALANCE SHOWN ABOVE..... $ $
(These totals should balance exactly with expenditure totals marked (X).

SCHOOLHOUSE FUND
(Expenditures)

DEBT SERVICE.
1. Payment of bonds.....
2. Interest on bonds.....
3. Sinking fund .....

TOTAL DEBT SERVICE.....

CAPITAL OUTLAY (Only such as spent from this fund).
1. Land .....
2. New buildings .....
3. Equipment for buildings.....
4. .....

TOTAL CAPITAL OUTLAY (Schoolhouse Fund)..... $ $

GRAND TOTAL OF EXPENDITURES (Schoolhouse Fund).....
(Show total actual expenditures in Column 1 and total estimated expenditures in Column 2.)

BALANCE ON HAND as of June 30 (Schoolhouse Fund).....
(Enter actual balance for year just ended in Column 1 and estimated balance at close of ensuing year in Column 2.)

(X) TOTAL EXPENDITURES PLUS BALANCE ON HAND (Schoolhouse Fund)..... $ $

SCHOOLHOUSE FUND
(Receipts)

*
2. Sale of bonds.....
3. Other sources .....
4. .....

TOTAL RECEIPTS FROM SOURCES OTHER THAN TAXATION..... $ $

BALANCE ON HAND JULY 1, 192....(Beginning of ensuing year. Enter in Column 2.)
BALANCE ON HAND JULY 1, 192....(Beginning of year just ended. Enter in Column 1.)

TOTAL RECEIPTS FROM OTHER SOURCES PLUS BALANCE ON HAND..... $ $

*1. DISTRICT TAX. (Tax levy for schoolhouse fund).....
(Enter in Column 1 actual amount of district tax received during the past fiscal year and in Column 2 estimated amount necessary for ensuing year. This amount may be determined by deducting the total receipts from other sources plus balance on hand (Column 2) from total estimated expenditures plus balance (Column 2) and will be the exact amount needed to balance estimated receipts column with estimated expenditure column.)

GRAND TOTAL OF RECEIPTS, INCLUDING BALANCE SHOWN ABOVE.....

(These totals should balance exactly with expenditure totals marked (X). $ $

FOREWORD

This form is arranged so that it exactly fits in with the classification of accounts of the main books of the system. It is so arranged that the totals necessary to fill it out may be readily copied from the main books.

The General Fund and Schoolhouse Fund are taken up separately in unit and completed separately, finally arriving at the exact amount of tax to be levied by the local board, which is entered on the Budget Estimate blanks to be certified to the County Auditor and thence to the Budget Department. This form leads up directly to the final blank mentioned.

This form is very convenient to make out in duplicate to be handed to all members of the board, for their information, to help in deciding the financial program.

One copy should be kept on file in the records of the secretary so that comparison can be made of the actual and estimated amount of each item after the estimated year is passed.

Further information of this form is given in the bulletins on the IOWA UNIFORM SCHOOL ACCOUNTING SYSTEM issued by the Budget Department.

INSTRUCTIONS

1. The General Fund is taken up completely on pages one and two and has both Expenditures and Receipts listed. The Schoolhouse Fund is taken up completely on page three and has both Expenditures and Receipts listed.

2. The two columns at the right of the pages are arranged for (Column 1) record of the finances of the year just gone by and (Column 2) estimate for the coming year.

3. First, fill out Column 1, from the totals of the columns listed identically in your main books. When this is done you have a complete detailed report of the financial activities of the year just passed. This first column should not be filled in until you have closed your books for the meeting of July 1st. It should be filled out on that date or as soon after as possible (not more than a week).

4. Now, with Column 1 filled in you have a basis to estimate the Receipts and Expenditures of both funds for the next year. The second column may be filled out then by the superintendent and secretary working in conjunction and perhaps the finance committee of the board. Then it may be presented to the board for adoption with such changes as they may see fit. Or, the sheets may be filled, only in Column 1, and distributed to the board and then the board in session may consider each item, as a body. The former method is recommended to expedite the work. This form may be used in preparing a statement any time during the year and will inform the school board as to expenditures for each and every purpose, together with unexpended balances.

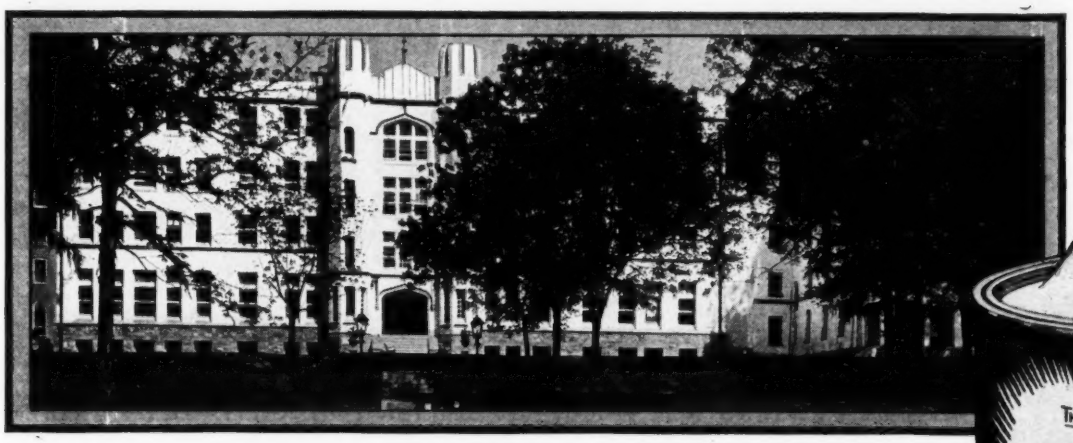
5. In order to make the financial statement complete, the balance on hand at the beginning and the end of the year must be considered. A place is provided under expenditures in which to enter in Column 1 the actual balance on hand for the year just ended and in Column 2 the estimated balance which will be on hand at the close of the ensuing fiscal year. The estimated balance will vary from year to year, depending on the increase or decrease of receipts and expenditures. Under receipts will be listed in Column 1 the balance on hand at the beginning of the year just ended, and in Column 2 the amount on hand now or at the beginning of the new year.

Instruction as to balance applies to both general and schoolhouse funds, and if handled as set out above receipt and expenditure columns should always balance.

6. In Column 2, of both funds, are placed the **estimated** Expenditures and Receipts for the coming year. These estimates should be made as carefully as possible in the light of the information gleaned from the figures in the first column. Consider each item carefully before placing in Column 2 the estimate of that item for the coming year.

7. If deemed necessary, a sum may be reserved with which to meet unforeseen expenditures which may arise during the ensuing year. A space is provided in the expenditure column for this purpose.

8. In a system having more than one building, one form may be used for each building, excluding the general items, and then a final summary made on one sheet. This may or may not be done, for the information of the board, as it is not necessary but optional with officers of the district.



In this splendid modern building of the Maryland College for Women, at Lutherville, Md.—as in hundreds of other colleges and schools—walls and woodwork are painted with Barreled Sunlight

Handsome · · Clean · · Durable school interiors —

painted with Barreled Sunlight in white or light tints—

REPLACING either paint or enamel on walls or woodwork, Barreled Sunlight has long been a standard of lasting cleanliness and good looks. Three different finishes — all easily tinted—make this famous product useful throughout the school.

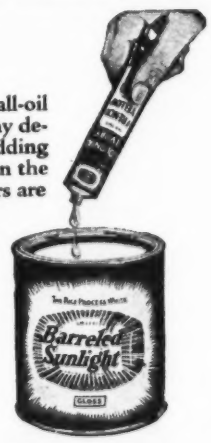
For lavatories, stairways, kitchens, etc., where maximum light and washability are essential, the approved finish is Barreled Sunlight Gloss. Its deeply lustrous surface is so smooth it washes like tile—and so durable that repeated washings will not wear it away. Handsome as the finest enamel, it costs less and requires fewer coats.

For places where less than a full gloss is required, the logical choice is Barreled Sunlight Semi-Gloss. It has a still softer lustre than the Gloss and is as easily washed.

Any part of the school interior can have the advantages of Barreled Sunlight—in Gloss, Semi-Gloss, or Flat finish—white or tinted any shade

Easy to Tint

Barreled Sunlight, an all-oil product, is easy to tint any desired shade by simply adding ordinary colors-in-oil. On the smaller jobs many painters are using the new Barreled Sunlight Tinting Colors, in handy tubes. In quantities of 5 gallons or over, Barreled Sunlight is tinted to order at the factory, without extra charge.



For the duller effect sometimes preferred on walls of well-lighted rooms, nothing is more satisfactory than Barreled Sunlight Flat finish. Extremely handsome, and washable too, though naturally less durable under washing than the Gloss or Semi-Gloss.

Barreled Sunlight is so opaque, and so easy to apply with brush or spray, that it requires the minimum amount of labor to complete any given job.

Sold in 55- and 30-gallon churn-equipped drums, and in cans from ½ pint to 5 gallons. Where more than one coat is required, use Barreled Sunlight Undercoat first.

There is a local distributor of Barreled Sunlight in all principal cities. Mail the coupon for further information and a sample panel painted with Barreled Sunlight.

U. S. GUTTA PERCHA PAINT CO.
Factory and Main Offices
44 Dudley Street, Providence, R. I.
New York—350 Madison Avenue
Chicago—659 Washington Blvd.
San Francisco—156 Eddy Street
Distributors in all principal cities. Retailed by over 6000 dealers

Barreled Sunlight

Reg. U. S. Pat. Off.

U. S. Gutta Percha Paint Co.
44 Dudley Street, Providence, R. I.

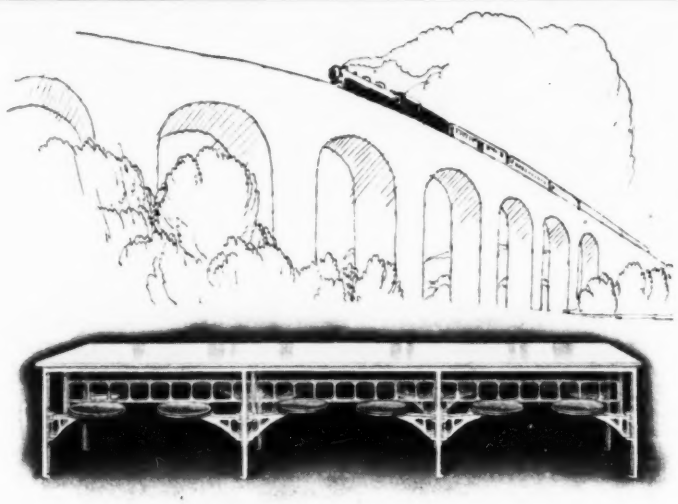
Please send me descriptive literature and sample panel painted with Barreled Sunlight. I am interested in the finish checked here—

Gloss ( ) Semi-Gloss ( ) Flat ( )

Name .....

Street .....

City ..... State .....



Strength—

Built like a Bridge for Lifetime Service

Here is a table, engineered like a bridge, to stand heavy wear. It is reinforced at every point, **built especially for school use.** Install these tables, and see how they stand the test of daily use of thoughtless youth. Then you'll know that the **constant replacements** you have made in the past **are not necessary.** There are years and years of service in this practical yet attractive installation.

SANI-ONYX Top

Sani-Onyx Tops are just what you need for school installations. They are smooth as a china dish — and easy to keep clean. So different from composition tops. Bright and glistening always—simply by wiping them with a damp cloth.

SANI-METAL Bases

Sani-Metal Bases give strength and firmness—they banish the wabble. They are rust-proof—**damp brooms or mops can't damage them.** For the best of service, specify and demand Sani-Metal Bases.

If you are planning a school installation, send outline drawing showing dimensions of the room, location of doors, windows, interior columns, etc., stating number of persons to be fed at one time. We will gladly furnish you a blueprint **free of charge.** Just fill out the coupon below.

RAISED RIM

The raised rim is an exclusive feature of other Sani equipment. Prevents chipping and cracking of edges, also spilled liquids from running on clothing or floor.

Sani-Onyx Sani Sani-Metal

Sani Products Co.

20 Sani Bldg., North Chicago, Ill.

Selling organization for Marietta Manufacturing Co. and Chicago Hardware Foundry Co.

SANI PRODUCTS CO., 20 SANI BLDG., NORTH CHICAGO, ILL.

Gentlemen: I am enclosing rough diagram of my cafeteria problem for your engineers to work out. I understand this service is free. Please include a catalog with the blueprints.

Name.....

Address.....

City..... **State**.....

Two more rooms for the second term

Whether you need one, two or more, you can get them quickly by ordering units of the Ambler Asbestos School Buildings shown below. Cold weather won't hinder seriously the erection of these buildings.

Paneled, roofed, sheathed with **fireproof** Ambler Asbestos building material of the most permanent and substantial type. The upkeep is negligible, as the main areas of these unique buildings have absolutely no need for paint.

Shipped in standard, easily-handled sections that can be speedily erected, yet the buildings have the appearance of structures costing several times as much. Can be salvaged later at a large part of original cost.

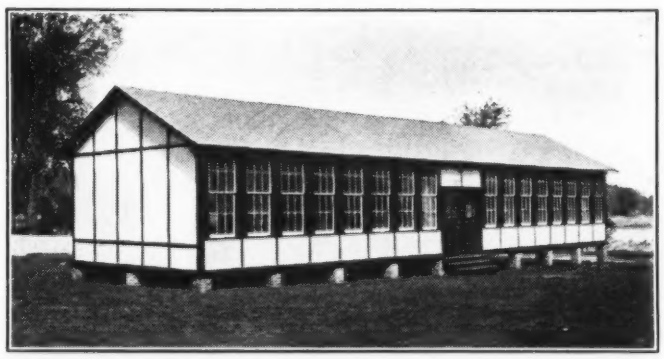
May we tell you about our services and the cost?

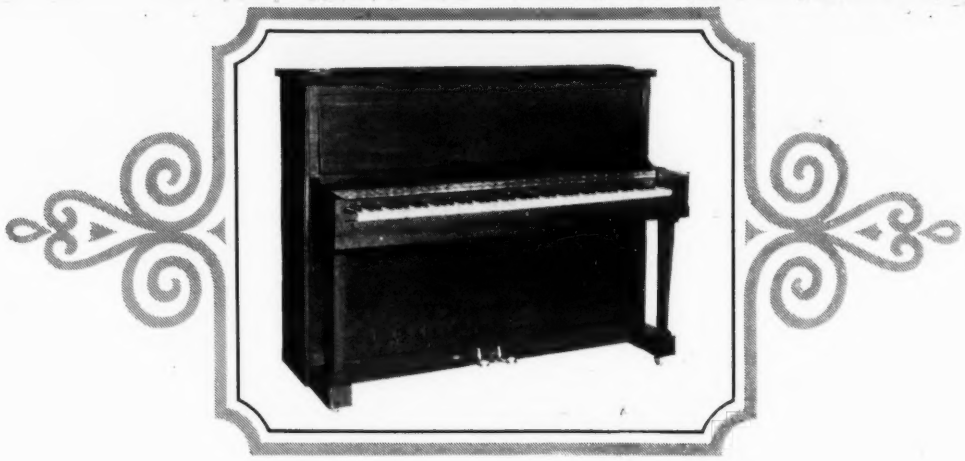
Asbestos Buildings Company

1013 Liberty Trust Bldg., Philadelphia, Penna.

or

228 Pennant Ave., Pittsburgh, Pa.





Amazing Improvement in Tone with the Miessner Sono-Rim

The new Miessner is a revelation to every musician who hears it. The Sono-Rim, built into the back of the sounding board, produces a tone truly amazing in quality and volume.

In its field, this notable achievement ranks with the recent changes which have revolutionized the tone quality of radio sets and phonographs. It still further entrenches the little Miessner in its dominant position among school pianos.

Mail the coupon for full information.

MIESSNER

THE LITTLE PIANO WITH THE BIG TONE

If you are offered lower prices remember that the Miessner is sold at the lowest price consistent with Miessner quality standards.

MIESSNER PIANO CO.,
118 Reed St.,
Milwaukee, Wis.

Please send me complete information regarding the new Miessner with the Sono-Rim.

Name.....

Position..... School.....

Address.....

City..... State.....

AN ACCOUNTING SYSTEM FOR HIGH SCHOOL ACTIVITY FUNDS

(Concluded from Page 70)

3. All items from the journal are posted according to the nature of the entry (which is self explanatory).

4. When an entry has been posted, the page to which it was carried (in the ledger) should be entered in the ledger-folio column of the book of original entry (viz. cashbook or journal). Likewise in the ledger-folio column of the ledger account, the page from which it was posted (in either the cashbook or journal) should appear. If such a procedure is followed, every entry will be properly tabulated and indexed. In the books of original entry we know at a glance the page where any entry is posted. In the ledger we can quickly ascertain the source of the entry and can immediately refer to it for further detailed information. The amount of money which any activity has on hand is shown by the excess of the credit over the debit items in the account.

Book of the Activity Manager

The purpose of the activity manager's book is to show at any time the amount of money which he has on hand and the reason why his balance is in its present condition. The book should contain columns with the following captions: date, explanation, income, expenditures, and balance. The entry required for this record is simple and should be made by the activity manager when the transaction takes place.

Purchase Requisitions

Each organization should have a pad of purchase requisitions and use it whenever any purchase is made. It may take various shapes or arrangements, but it should contain the following elements: name of activity, date, name of the firm from whom the goods are to be ordered, quantity of goods ordered, specifications, price, and the signature of the person approving the order. The requisition should be made out in triplicate. One copy should go to the dealer from whom the goods are ordered, another copy should go to the system manager, and the third copy should be kept by the activity manager. As a result there is likely to be little or no danger of disputes as to the validity of any bill. The dealer has specific orders for the goods, signed by a responsible party; the system manager has the details of the expected bill before him and can check it against the invoice when it arrives; the activity manager has a requisition copy of goods ordered and consequently he is protected.

Memo. Slips

Memo. slips should be used by the system manager as receipt forms for funds deposited with him. A notation made out on memo. slip by the activity manager should be given to the system manager whenever the former desires a change in the books (example, loans). The system manager should insist that these slips be made out for they serve as a protection, by giving him written authority for the change in the books. They also serve as a desired check when auditing the books. The memo. slips should contain the following elements, arranged in suitable form: date, transfer details for (name), from (name), and adequate space for an explanation.

Auditing the Books

When the books are properly cared for the following conditions will exist (these steps may be used as a procedure for auditing):

I. The cashbook balance will equal:

1. The amount of money in the bank as shown by the passbook or the checkbook.
2. The sum of the balances of all ledger accounts.
3. The sum of the balances of all activity manager's books.

II. The cash deposits will equal:

1. The sum of the memo. entry receipts given to the activity managers.

III. The cash disbursements will equal:

1. The sum of the paid invoices with requisitions attached, held by the system manager.
2. The sum of the paid purchase requisitions held by the activity managers.

IV. The balance of the activity manager's book will equal:

1. The balance of the activity account in the ledger. (The total income is equal to the total memo. entry receipts. The total disbursements is equal to the total of the paid purchase requisitions).

V. Journal.

1. Every entry in the journal is supported by an entry memo. held by the system manager.

VI. Ledger.

1. The balance of each individual account is equal to the balance of the corresponding activity manager's book.
2. The balance of all ledger accounts is equal to the total of all activity manager's book balances.
3. The balance of all ledger accounts is equal to the cashbook balance.

In case of a disparity between the books of the activity manager, and the books of the system manager, the burden of proof lies upon the one who has not the proper supporting paper (viz. memo. slip or purchase requisition).

—The National Child Labor Committee of New York City, in a statement recently given to the press, intimates that the National Association of Manufacturers is seeking to effect the withdrawal of children from school at an early age, thus depriving them of the benefits of an adequate education. A report of the Association's committee on junior education and employment advocates that children be allowed to leave school and go to work at 14 years.

The National Committee in opposing the Association's proposal, endeavors to prove the position taken that children should remain in school until the age of 16. In support of this opinion, they quote Mrs. Helen Thompson Woolley of Teachers' College, who says: "Although educational studies and a growing knowledge of differences in mental ability have revised my former attitude with respect to the problems of the child who leaves school for work, I have not altered my belief that children should continue their education until they reach the age of 16."

Mrs. Woolley takes issue with one assumption of the Association's report, namely, that since staying in school does not mean higher wages, it therefore follows that the group of retarded children who go into routine factory work gains nothing by remaining in school. Mrs. Woolley contends that because of the fact that these children are destined for routine factory work, it is more important that they continue their education. They need a type of education that will give them a right attitude toward and interest in their work, and that will enable them to enjoy the leisure hours not occupied by the earning of a living.

For the Requirements of Every School

Schools everywhere, have found that Rundle-Spence Vertico-Slant Fountains provide the most practical and sanitary drinking facilities. Two of the more popular kinds for "school requirements" are pictured here.

Lips can't touch the R-S nozzle—the contamination arising from lip-contact is automatically eliminated. Besides, R-S "health bubblers" take up little space, check the waste of water and give continuous service for many years.

The R-S line includes Sanitary Drinking Fountains, Bath and Plumbing Fixtures and Supplies. Write for catalog with prices, specifications, and complete information.

RUNDLE-SPENCE MFG. CO.
51 Fourth St., Milwaukee, Wis.

RUNDLE-SPENCE

C 92

Handsome vitreous china one piece fountain. Combines all the conveniences of the vertical stream with the special slanting stream feature. Glass or cup may easily be filled from it.

C 147

A pedestal fixture of galvanized pipe with extra heavy vitreous China bowl and vertico-slant stream. An extra strong fountain for the playground.

THE UNIT SYSTEM OF VENTILATION

(Concluded from Page 38)

over the auditorium ceiling to a number of grills in the ceiling, from which points it drops down through the auditorium volume, and is collected through grills at the front of the stage and below the floor of the stage, in a tunnel duct. From this tunnel duct the air is collected through to built-in ventilation shafts, one on either side of the stage loft and auditorium wall spaces, by a fan in a penthouse over each shaft above the roof level. The grills in the auditorium ceiling are circular and are a part of the decorative feature of the ceiling surface. The chain supports of the lights in the auditorium drop from the centers of these grills.

The air for the gymnasium, locker rooms, dressing rooms, and showers for boys on one side of the gymnasium, and for girls on the other side of the gymnasium, is taken from the light courts and air wells which form part of the interior construction of the square-type building. The air is taken in by six ventilation units fastened to the side walls, three on either side, about fifteen feet from the floor level. From this point the air circulates throughout the gymnasium volume, and is driven out through grills, six in number, in the side walls into the dressing rooms and locker rooms—the boys' group of rooms on one side and the girls' group of rooms on the other side of the gymnasium. These grills are about seven feet from the floor level. Metal conductors with ten or more openings to various points of the locker rooms, and dressing rooms collect the air and send it through to the shafts on either side of the stage loft, as mentioned above. A large grill leads the air out of the shower rooms to the same point.

The air for the classrooms is brought directly from out of doors through a conductor in the building wall—showing a grill on the outside of the building—by a motor-fan. The air is drawn through a coil in the ventilating unit and heated. Another radiator of ordinary type in the room supplements the heat supply. The pressure from the fan in the ventilation unit circulates the air and forces it out through the door of the room, which has a grill in the panel of the lower half of the door. From here it travels directly into the corridors. The corridors act as a system of ventilation ducts. The air from the corridors leaves through ventilators in the lower part of the built-in lockers. As it passes through the lockers, it ventilates them and then it passes out through the perforated tops of the lockers into a conductor space which lies immediately above the whole length of the tier of lockers. From here it is collected to the shafts on either side of the stage loft, located as indicated above. To insure a more certain circulation out of the corridors, extra conductors are distributed throughout the corridor spaces leading directly to the roof. These conductors have grills at the corridor exposure and are an integral part of the locker construction as far as facing is concerned, although the sheet metal conductors lead directly to the roof outlets.

We moved into our building September 20, and we have found that the system is giving good results. There have been some near-zero days, but so far, we have had to use only one of the three boilers. The use of the boilers will be rotated, as is common practice. In cold weather we shall use two at the same time.

In putting in the unit ventilating system we were a little skeptical about the item of noise in the motors in the classroom units. We are glad to find that the faint hum of the motor is no disturbance to class activities. The time the system has been in use is so short that we have no comparative figures, as yet, on cost of coal consumption and cost of current consumption for the various unit ventilator motors. We believe, however, that the figures will show that the increased cost of current consumption will be more than made up by the decrease of cost in coal consumption. The problems of dry-air and overheated rooms on the sunny side of the building and lack of distributive control are solved by the unit ventilating system to our satisfaction.

All laboratories, shops and home economic rooms have separate ventilating shafts running directly to the roof from the rooms. The ventilating units bring in the fresh air from out of doors as in the case of all recitation rooms, but the rooms mentioned have no grills in the door panels. The air in these rooms, because of dust and fumes, is sent out directly through the roof outlets.

THE PROBLEM OF STATE RESOURCES OF SCHOOL REVENUE

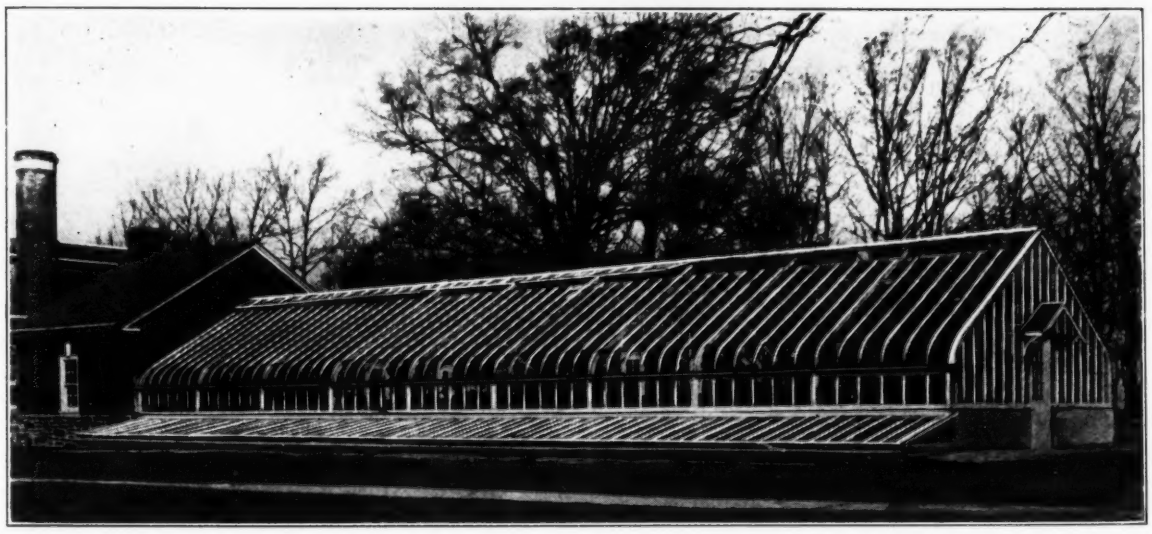
(Continued from Page 43)

The bases of assessment presented in Table IV represent state averages and therefore fail to even suggest the wide variations within the states represented and within the counties included in such states. The case of Tennessee has already been referred to. How widely bases of assessment vary within two individual states is revealed by an investigation made in 1922, covering twenty-three Texas counties, and by an investigation in Utah, conducted by the secretary of the State Board of Equalization and extending throughout the three years 1923, 1924, and 1925.

The laws of Texas provide that all property shall be assessed at its true and full value which is the price that could be obtained for it at a private sale where the property is situated. Of

(Continued on Page 146)

GLASS ENCLOSURES



Glassboro, N. J., State Normal School Builds a Greenhouse 75 Feet Long and 18 Feet Wide

WHY, you ask, is it 75 long and 18 wide? In the first place, 18 feet wide is a standard width giving ample room for three benches and two goodly sized walks. The 75 feet length makes possible three separate compartments, each 25 feet long, making a well-balanced outfit.

It makes possible the having of variant temperatures to meet a wide gamut of plant growing requirements.

The frames at the side are a valuable auxiliary, relieving the crowding of the benches, while adding still further to the breadth of growing possibilities.

The house is steel framed and only the highest grade greenhouse cypress is used.

To the service of our School Department you are welcome, entirely without any obligation of any sort.

FOR FOUR GENERATIONS BUILDERS OF GREENHOUSES

Lord & Burnham Co.

Builders of Greenhouses and Makers of Boilers

EASTERN FACTORY
IRVINGTON, N. Y.

WESTERN FACTORY
DES PLAINES, ILL.

CANADIAN FACTORY
ST. CATHARINES, ONT.

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CONT. BK. BLDG.

BOSTON
LITTLE BLDG.

CLEVELAND
1304 ULMER BLDG.

DENVER
1247 SO. EMERSON ST.

KANSAS CITY
COMMERCE BLDG.

ST. LOUIS
704 E. CARRIE AVE.

MONTREAL
124 STANLEY ST.

GREENSBORO
NO. CAROLINA

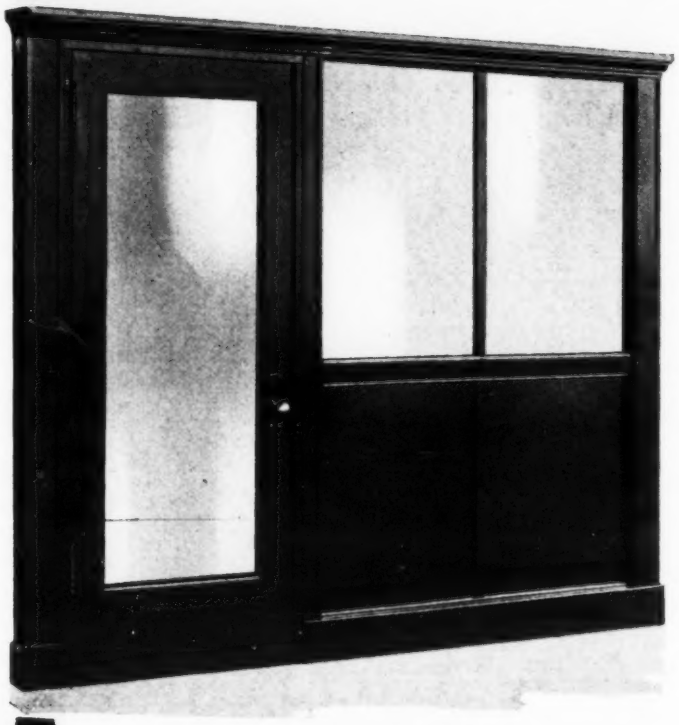
TORONTO
HARBOR COM. BLDG.

BUFFALO
JACKSON BLDG.

ST. CATHARINES
ONTARIO

LORD & BURNHAM CO.

Partitions of MILLS METAL



GENERAL OFFICE PARTITIONS

This new Mills Metal Product enables you now to secure a steel partition possessing all the architectural features of any hand built wood installation.

It excels in strength, appearance, cleanliness, richness of finish, supreme usefulness and economy in cost.

For manual training departments, laboratory use, corridors, etc., Mills Metal Industrial Partitions are especially recommended.

MILLS METAL TOILET PARTITIONS

For Toilets, Shower and Locker Rooms, Mills Metal Partitions are nationally used because of their sanitary advantages without the sacrifice of appearance.

In design—in sturdiness—in finish—in permanent attractiveness, they are especially desirable.

Our Engineering Department is at your service to suggest practical layouts using Mills Metal Partitions to give you an economical and attractive installation.

Write also for our new literature on General Office Partitions, Industrial Partitions and Toilet Partitions.

The Mills Company

WAYSIDE ROAD AT NICKEL PLATE R R. MILLS METAL CLEVELAND, OHIO

(Continued from Page 144)

the 23 counties studied, in 2, property was assessed at 35 per cent of its true value; in 9 counties at 32 per cent; in 6 at 20 per cent; in 5 at 16 per cent; and in 1 at 13 per cent. Stating the matter in somewhat different terms, we may

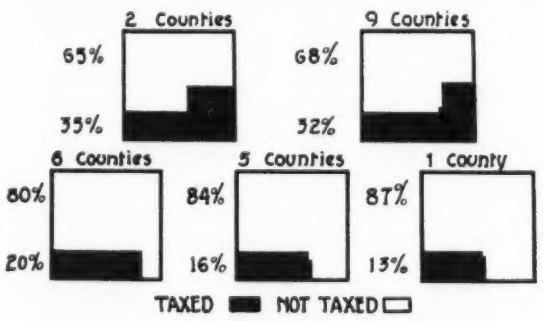


FIGURE 1. INEQUALITIES IN ASSESSMENT IN 23 TEXAS COUNTIES IN 1922. DATA TAKEN FROM THE TEXAS OUTLOOK, MAY, 1922.

say that in 2 counties 65 per cent of the property was not taxed, in 9 counties 68 per cent, in 6 counties 80 per cent, in five counties 84 per cent, and in 1 county 87 per cent. The conditions just described are presented graphically in Figure 1.

The laws of Utah require that all property shall be assessed at its true value. The State Board of Equalization interprets the term "true valuation" as meaning the price a piece of property would bring if the sale is a normal sale, i. e., not a forced sale. The investigation extending through the three years already referred to, shows that, taking the state as a whole, property is being assessed at approximately 55 per cent of its true value, but that the percentage of true valuation which is assessed, varied all the way from 39 to 75 per cent. The school system of Utah is organized into 40 school districts; of these 40 districts only 2 assess property at more than 70 per cent of true valuation, 12 districts at between 60 and 70 per cent, 11 at between 55 and 56 per cent, 12 at less than 50 per cent.

Figure 2 shows the proportion of each $100 of estimated true valuation which is taxed in Utah's 40 school districts and the proportion which is not taxed. As the figure indicates, the districts are presented in 8 groups, arranged on the basis of the proportion of true valuation which is taxed. The figure shows the proportion of each $100 of true valuation that is taxed in the district most representative, (i. e., the approximate median) of the group. In groups where it was not possible to select an individual district as representing the approximate median true valuation, which is taxed, the average was taken.

Inequalities in Assessment Inevitable

There are two reasons why inequalities in assessment are inevitable in states where both the state and its constituent political corporations, such as counties or school districts levy taxes on the same property. Owing to the fact that assessments are commonly made by local officials who depend for reelection upon the good will of the individuals whose property they assess, there is the constant temptation to undervalue property, particularly in the case of wealthy and influential citizens.

Again the more the valuation is lowered, the smaller will be the amount which the local community pays into the state treasury when a state tax is collected. It is evident that a district which assesses property at 30 per cent will, when taxes are collected, pay the state only 30 cents on the dollar, whereas the district which assesses property at 70 per cent will pay 70 cents on the dollar. Yet each district demands and receives, when state school funds are apportioned, 100 cents on the dollar.

From the above facts, we see that the district which assesses its property at a high per cent of its true valuation is penalized twice; first when it pays the state taxes; second, when state school funds are apportioned among all the districts of the state. It should be noted that the district assessing its property at a low per cent of its true valuation is not obliged to suffer any loss or embarrassment when it desires to raise

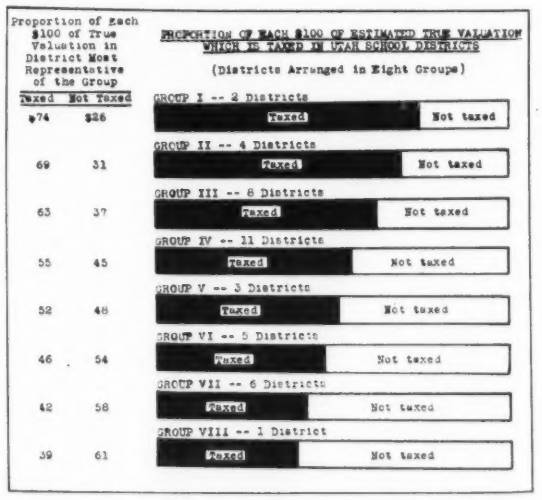


FIGURE 2.

local funds, for it can always increase its local tax rate (up to the maximum legal limit) sufficient to provide the necessary local funds. By pursuing this twofold policy of lowering its local valuation and increasing its local tax rate, such a district gives out what is frequently a grossly exaggerated impression of its poverty on

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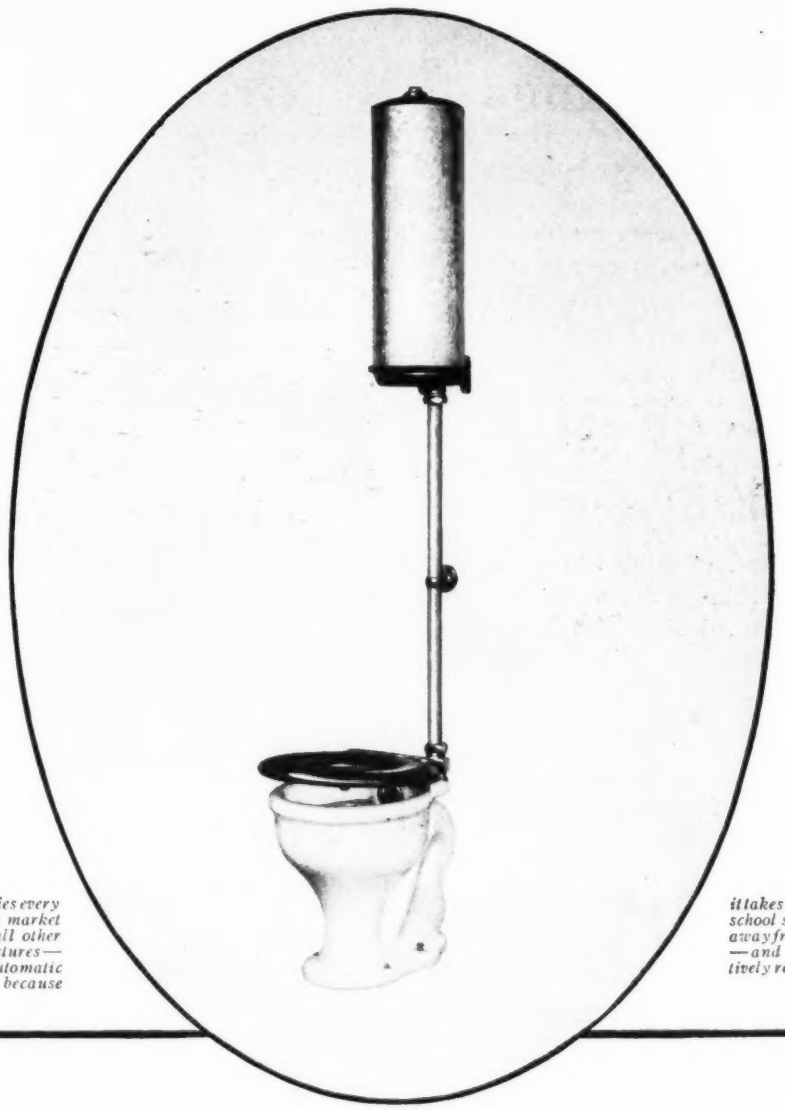


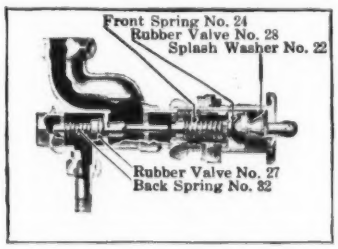
Though Clow supplies every type of closet on the market today—as well as all other school plumbing fixtures—the Clow-Madden Automatic is being emphasized, because it takes the responsibility for school sanitation completely away from childish memories—and because it so effectively reduces costs.

If Your Health Depended Upon a School Board–

If you were a child in school, would you be able to shoulder the big responsibilities for health protection and sanitation? Or, should that responsibility revert to an architect and school board?

The Clow-Madden Automatic Closet does not trust childish memories. Every time it is used, the Clow-Madden automatically scours its bowl, from rim to trap.

Flushing water sweeps out from the closed-top compression tank, with a pressure equal to that developed in a 30 to 40 foot standpipe. The specially constructed Clow bowl distributes it evenly to rim and trap—as no other closet can.



Sectional view, Madden valve—but two moving parts.

Water control is sharp and wasteless. And the simple valve, with but two moving parts, meets rough school usage without flinching. Long-life, low cost records like the one of 20 years in a Racine, Wisconsin, School, emphasize this point.

JAMES B. CLOW & SONS, 201-299 North Talman Ave., CHICAGO

Sales Offices in principal cities

CLOW

PREFERRED FOR EXACTING PLUMBING SINCE 1878

Better Ventilation for School Buildings

You will agree that the best system of ventilation is one that furnishes a continuous supply of pure, fresh air, free from all odors, with temperature automatically controlled, to relieve the room occupants of any responsibility in this regard. Clean, dust free air is essential with correct relative humidity.

These conditions are best fulfilled by use of the positive acting fan blast system.

ELECTROZONE Systems

make use of this method, and effect large saving in first cost of plant through reducing sizes of boilers and blast heaters required. Partial air recirculation and purification furthermore saves one-half of fuel cost during life of the building.

Electrozone
Ventilating Ozonators

Electrozone
Water Purifiers

AIR CONDITIONING & ENGINEERING CO.
2914 S. Jefferson Ave. St. Louis, Mo.

Improved Painting — Lowered Labor Costs

These two spray-painters are doing the work of 8 to 10 brush men. They are applying a smoother, more uniform coating of paint, a coating that completely covers the surface and that has the hiding power of two brushed coats. Consider this improvement in quality of work and this economy of close to 80% saving in labor cost that painting the DeVilbiss way makes possible.

The DeVilbiss Spray-painting System will enable you to do *your* school painting with the same marked degree of advantage and profit.

A word from you will promptly bring further interesting facts.

THE DeVILBISS CO., 268 Phillips Ave., TOLEDO, OHIO

New York — Chicago — Detroit — San Francisco — Cleveland
Indianapolis — St. Louis — Milwaukee — Minneapolis — Windsor, Ontario

DeVilbiss
Spray-painting System

(Concluded from Page 146)

the one hand and of its economic effort on the other hand, while at the same time it is actually defrauding the state.

The facts already presented offer conclusive evidence of the folly of attempting to depend in the future upon the general property tax as a source of the greatly increasing school funds. Before turning to a consideration of newer and sounder types of taxes it is necessary to consider briefly one other widely used and ancient type of tax, namely, the poll tax.

Poll and Miscellaneous Taxes

The so-called poll or capitation tax is one of the oldest types of taxes in existence. Although long condemned by students of taxation, it is still employed in the majority of our states, either as a state, a county, a district, or a municipal tax. Evidences are not lacking, however, of its declining favor. California in 1914 abolished taxes on all pools, except aliens. On aliens she still levies an annual per capita tax of $10, the proceeds of which are added to the school fund of the county wherein collected. New Mexico in 1925 abolished what had been a very extensive system of poll taxes.

Despite its abolition in certain states the poll tax is still levied in no less than 39 states. Seventeen of these states levy such taxes to provide school revenue. Five states levy poll taxes as state taxes; 11 as county taxes, and 5 as district, city, or other local taxes. In some states the poll tax is levied by more than one class of political corporation. Thus in Mississippi poll taxes are levied by both the state and the counties; in Kentucky, by counties and districts; and, in Indiana, by the state, the counties, and the school districts.

In a few states, such as Alabama, Arkansas, and Mississippi, the proceeds of state poll taxes are returned to the county, the district, or other political corporation, in which they were originally levied and collected. Virginia levies a state school poll tax of $1.50; one dollar is credited to the state free school fund and the remainder is returned to the city or county wherein levied and collected. Only 4 states, Indiana, Texas, Virginia, and West Virginia, levy a poll tax as a state school tax and add the proceeds to a state school fund. At its best the poll tax must be regarded as an object of historic interest rather than a source of large actual, or potential importance. This may be seen from the case of Indiana which employs the poll tax more widely than any other state. In Indiana in 1924 the aggregate proceeds of township and city and state poll taxes constituted slightly less than .7 of 1 per cent of her net school receipts.

Certain states devote to schools taxes which are so various in character as to necessitate classing them under the vague term, miscellaneous. Georgia thus disposes of the proceeds of taxes on dogs, on shows, and on exhibitions. West Virginia thus utilizes the proceeds of taxes on marriage licenses, on forfeitures, and all state licenses except motor vehicles.

The present article has attempted to show the folly, not to say the impossibility, of attempting to provide the revenues which the schools of America will require in the future from the sources which, in the past, have furnished the major portion of state school funds. These sources which have been, but which can no longer be, the financial mainstays of our school systems include permanent funds, poll taxes, and the general property tax. The present article has endeavored to show also that in the future our schools must derive their state support from some form of taxation. What types of taxes may best be looked to will be considered in a subsequent article.

HOW SHALL THE NUMBER OF ATTENDANCE OFFICERS IN THE COMMUNITY BE DETERMINED AND SELECTED

(Continued from Page 45)

acted in accordance with a well-defined plan, the complete introduction of which will cover a period of ten years.

In 1918 Philadelphia employed one officer for each unit of 7,500 children reported in the school census. At that time New York, Newark, and several other cities in the East, reported a ratio of one officer to 5,000 children. The present ratio of one officer to 3,500 children, therefore, has been reached in Philadelphia by annually increasing the staff through a period of years. The method of gradually enlarging the corps was followed in order that the additional costs involved might be spread over several years. The suggested ratio of one officer for each unit of 3,000 children, which Philadelphia is now approaching, should be accepted and used until experience has shown that it is too large.

The appointment of attendance officers should be made from eligible lists prepared in accordance with the results of competitive civil service examinations. These examinations should be held under the direction of the school authorities, and the official in charge of the supervision of the attendance service should participate in the preparation of the examination questions and in the marking of the papers submitted. Applicants for admission to the examination should have a broad cultural background for the work and should, therefore, be required to present a certificate of educational training. The minimum requirement should be graduation from a high school with an approved four-year course; qualifications should be higher if the salary schedule and the conditions of serv-

(Concluded on Page 150)

Cleaner hands and faces—lower towel cost

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The tissue that is soft, strong and absorbent. 800-sheet packages. 125 packages to fibre cartons. Nickel, green or white cabinets leased.

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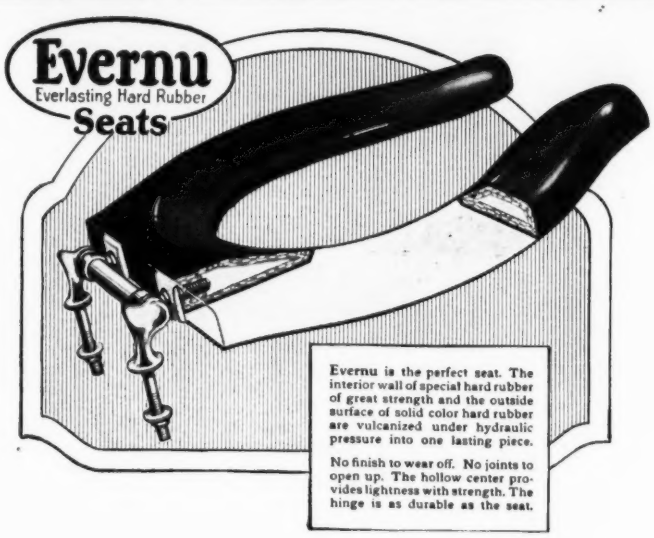
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(Concluded from Page 148)

ice will attract men and women of more advanced training. Character references and a medical certificate of physical fitness should also be required.

The technical examination should include an oral interview and written papers. The oral interview should be held in order to give the applicant a rating for appearance, oral expression, personality, ease in meeting people, and ability to deal properly with parents and children. There should be two written papers. The first paper should be a "true and false" examination dealing in the facts in the law to be enforced by the attendance officers. The second paper should test the applicant's knowledge of enforcement and treatment, the practical workings of the school, and finally, special problems in the social service and child welfare fields. The applicant should also be given an intelligence test as part of the written examinations. The results of the oral and written examinations should be combined in a general average, giving to the several subjects weights in accordance with their relative values. When the eligible list is prepared on the basis of the examination, the appointments should be made from the list strictly in the order in which the names appear. There should be no deviation from this practice. Appointments, however, should be for a probationary period of one year.

The quality of the service rendered by an attendance staff depends largely on the character of its personnel. The more intelligent and the more highly trained are the members of the staff the more effective the service and the more permanent the results achieved. Experience has shown that a high grade personnel can best be secured through competitive civil service examinations conducted by the school authorities. But experience has also shown that unless reasonable limitations be placed upon the amount of the service required even intelligent, highly trained attendance officers cannot render their best service.

THE DEPARTMENT OF SUPERINTENDENCE

(Concluded from Page 65)

This year for the first time the National Association of Secondary Schools is not meeting with the Department of Superintendence. The members will hold their convention February 24-26, at St. Louis.

JAMES H. HARRIS,
Superintendent of Schools,
Pontiac, Mich.
(Mr. Harris will preside over the section of "Problems of Cities of 10,000 to 100,000.")

Among the other organizations which will meet with the Department are the Deans of Women, the Kindergarten Council, the Council of Primary Education, the City Training Schools, the National Society for the Study of Education, the College Teachers of Education, the National Council of Education, and the Department of Vocational Education.

WILL MEET IN SEATTLE

The National Education Association has announced that its Summer convention for 1927 will be held June 3rd to 8th in Seattle, Washington. The preliminary local affairs are in charge of Supt. Thomas R. Cole. It is expected that a local committee will be shortly appointed.

THE MARYLAND TORNADO

A tornado of extreme violence swept over a limited area in Charles County, Maryland, on November 9th, which resulted in the deaths of fifteen pupils assembled in the La Plata elementary school, a two-room frame building.

From all accounts it appears that the storm was of a violence which no ordinary building could have resisted. The schoolhouse was lifted bodily from its foundations and dashed to the ground some distance away. A brick pier was torn from the ground and carried 130 feet. Several tons of earth were stripped from level ground and carried away.

The schoolhouse was old and some remodeling had been done within recent years. The house rested on brick and concrete piers but was not anchored to them. The roof framing was of good material. The sills were of white oak timbers, mortised and tenoned at the corners; the corner posts were of yellow pine, braced with 4 by 6 inch white oak diagonal braces, well spoked with nails.

While it is probably unnecessary, and perhaps impossible, to provide against such overwhelming wind forces, the storm damages at La Plata and elsewhere emphasize two precautions which are deemed desirable and inexpensive by the building experts appointed to study the construction of the building.

1. The sills of the building should be anchored strongly to the concrete foundations, which in turn should be massive and deep-seated. The foundations of built-up masonry, with horizontal planes of weakness are not so effective.

2. The roof structure should be strongly bolted or nailed to the wall framing, to prevent wind pressure under the eaves.

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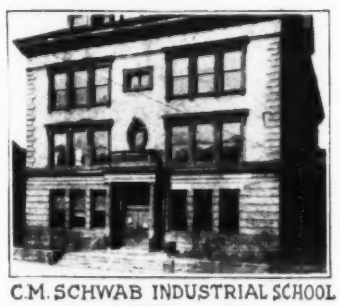

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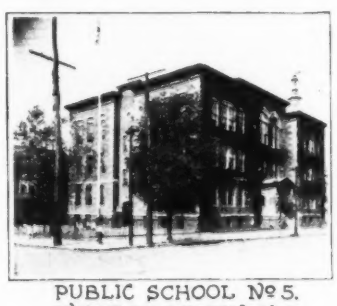

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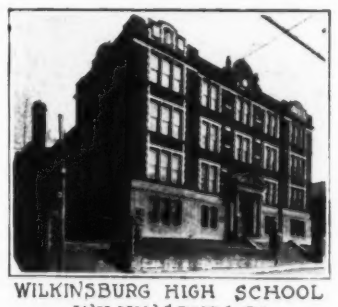

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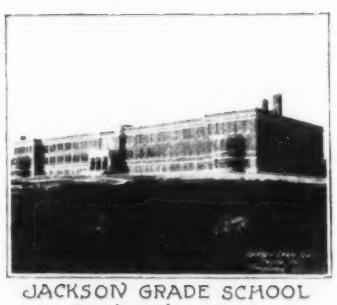

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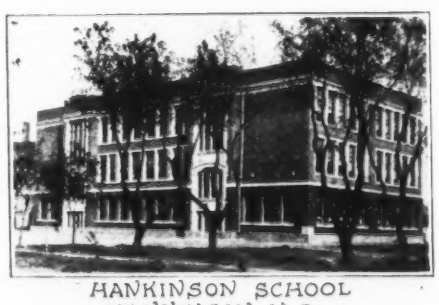

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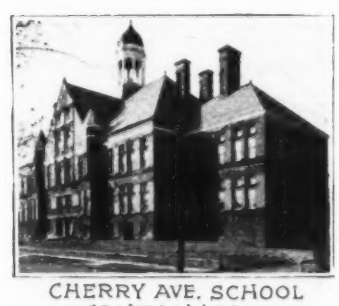

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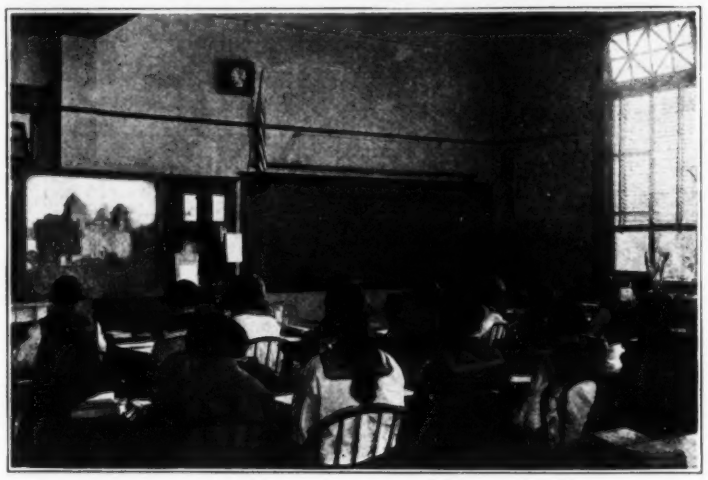

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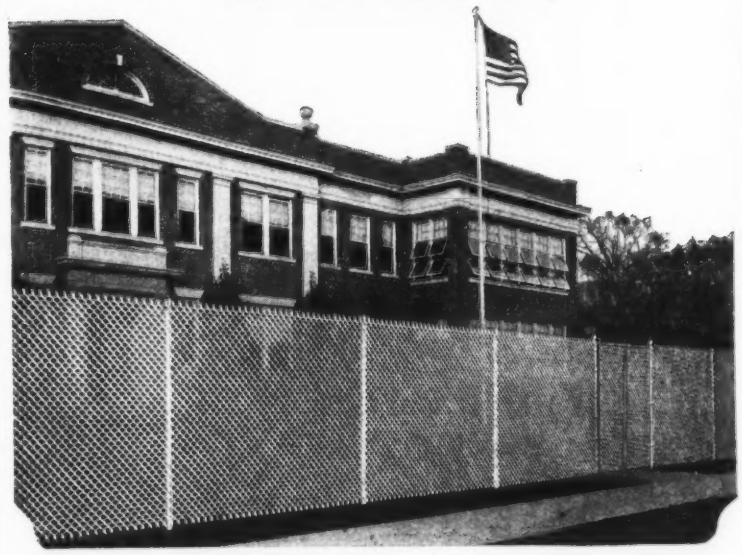

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BOOK REVIEWS

Birds in Rhyme

Julius King. Cloth, large quarto. Thos. Nelson & Sons, New York, N. Y.

Fourteen birds common to the United States are beautifully illustrated in color and aptly described in humorous verse.

The Call of the Wild

By Jack London. Cloth, 12mo., 268 pages. Price, 80 cents. The Macmillan Co., New York, N. Y.

It has always appeared to us that London's best works are most to be enjoyed when the reader knows nothing of the disordered life of the author, of his failings, and his weaknesses. The introduction to the present work does not add to the enjoyment of the classic story of an Alaskan dog or the three added short stories.

King-Clark Foods Test

By Florence B. King and Harold F. Clark. Price, $1 per package. World Book Co., Yonkers, N. Y.

This test serves as a standard measure of the student's knowledge and abilitv in the essentials of a course in foods or cooking. The directions point out its specific uses and the method of its construction and standardization.

A Pet Reader

By Edith Wilhelmina Lawson; 160 pages, cloth bound. Published by Beckley-Cardy Company, Chicago.

Here is a book that will delight small children. The author, who is a primary teacher in the schools of Rockford, Ill., tells about dogs and puppies, kittens and cats, hens and chickens, canary birds and wild birds, horses and ponies, rabbits, squirrels, as well as many other pets.

Many of the illustrations are done in color. They are well drawn and add considerably to the attractiveness of the book.

The Pathway to Reading

By Bessie Blackstone Coleman, Willis L. Uhl, and James Fleming Hosic; 378 pages, cloth bound. Published by Silver, Burdett & Co., Boston.

The authors, who are specialists in reading, have here compiled a sixth reader which contains an exceptional amount of good material. While they recognize old-time authors, such as Sir Walter Scott, John Ruskin, Paul Du Chaillu, Edwin Markham, Henry Wadsworth Longfellow, etc., etc., they also introduce the work of contemporary writers. Thus we find selected articles from writings of Henry Van Dyke, John Masefield, Sewell Ford, Alfred J. Church, and many others.

The Baby Animal Zoo

By William L. and Stella H. Nida; 246 pages, cloth bound. Published by D. C. Heath & Company, Boston.

This is book III of the series of science readers for silent reading now being brought out by the publisher. The present volume deals in a number of delightful animal stories, said to be based upon actual occurrences, adapted for small children.

The collection of stories includes dogs, monkeys, elephants, lions, bobcats, coyotes, bears, bunnies and camels. Much is told about birds. The text is set in all type, and the book abounds in attractive illustrations.

By Hazel G. Kinscella. Book Three. 214 pages. Published by the University Publishing Co., New York, N. Y.

Supplementary readers with a special purpose have multiplied rapidly in recent years, but few have had a fundamental idea more appealing than the present book. Some have sought to teach history, some have been geographical, some industrial, others have emphasized nature study. No series, however, has taken up a single great art and provided a logical, progressive course in the appreciation, history, and the classics of that art.

The present book is one of a series devoted to the appreciation of the art of music. It seeks to acquaint children with the great masterpieces of instrumental and vocal music, with the characteristics and the uses of the various instruments and combinations of instruments in orchestras, bands, etc. It tells the history of music from that of primitive people to the latest triumphs of the great operas. It tells the interesting life stories of great composers, singers, and conductors. It tells the part music has played in the progress of nations, in their wars, their triumphs of peace, their social and cultural life. It reproduces the inspiration, the charm, the moving power of music in all the whims and moods, all the joys and sorrows, all the work and play, all the comedies and tragedies of man's life and existence.

Rather inclusive content for a book or even a series of books, you say. Perhaps so, but the author's clever collection of poems, stories, folk tales, bits of history, and selection from great books of our literature have all been arranged to meet the interests and abilities of children and to convey some bit of inspiration or information on music. Suggestions for the use of phonograph records or selections to be played by the teacher link up the subject matter of the text with the best music. The present book for the middle grades would be most acceptable as a supplementary reader, even without the music called for. It is splendid for silent reading, informational, interesting, and well illustrated.

The Winston Simplified Dictionary

Edited by William Dodge Lewis, A.M., Ph.D., Litt.D., Henry Seidel Canby, Ph.D., Thomas Kite Brown, Jr., Ph.D. Cloth bound, 1,260 pages, thumb indexed. Price, $2.88. The John C. Winston Company, Philadelphia.

This work must be recognized not only as an important innovation in the dictionary field, but as a distinctive contribution to American literature. It approaches the task of interpretation and definition upon original lines at the same time holding to the elements of simplicity, accuracy, and completeness. The value and meaning of words are reexamined, weighed, and measured in keeping with this aim, as well as in the light of the modern needs in the general and literary use of the English language. The experts who have for a period of six years applied themselves to the herculean task of revaluing over 100,000 words and phrases have succeeded in producing a truly remarkable work.

It is evident that the editors were concerned in striking a range of words that would meet to the maximum the vocabulary in current literary use without ignoring the obsolete, archaic, and dialect words used in the English literature of a former day. Biblical and mythological, as well as scientific and technical terms, are duly recognized. Colloquialisms and slang expressions are recognized to the extent to which they are entitled.

In providing definitions the editors have borne in mind a clear distinction between the obsolete

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and the modern use of words, and have made it a rule to define the common meaning first before seeking to trace the original meaning. It is equally apparent that in the use of technical terms care has been taken to emphasize the living use of them.

One of the commendable features of the dictionary must be found in the fact that the words, which are defined, are printed in black faced type of reasonable size. In finding a word the eye will rest on the corner of a page and find the guiding word that will lead him to the specific word which is readily found.

In point of charts and illustrations, nothing is left undone. There are full page charts dealing with constellations and planets, chemical elements, geological areas, etc. Full page plates done in color depicting arms and armor, European customs, flags, birds, flowers, heraldry and insects may be found. Then, full paged drawings are shown which picture architectural styles, automobiles, period furniture, locomotives, rigging and sails, ships, trees, tools and so forth. The illustrations also extend to zoological and botanical subjects. Under miscellaneous a large number of timely and instructive illustrations are provided. Throughout the volume small drawings are employed in making the word, article, or thing which is interpreted, more clear to the understanding. All told, over three thousand of such pictures are employed.

Appendix I concerns itself with signs and symbols employed in architecture, astronomy, botany, chemistry, commerce and finance, communication with deaf mutes, electricity and radio, mathematics, medicine and pharmacy, meterology, music, proofreading, punctuation, topography, and woodcraft.

Appendix II deals with weights, measures and standards. The metric system is explained. Coins, calendars, interest tables are enumerated and information upon them is given.

Appendix III is devoted to foreign words and phrases while Appendix IV concerns itself with persons and places. A brief account of the development of the English language written by an authority is embodied in the introductory pages of the book. A guide to pronunciation is also provided. An atlas of world maps of North America, the United States and Canada, South America, Europe, Great Britain and Ireland, Asia, Africa, Australia, and the Philippine Islands are found in the book.

When the project is contemplated from the purely publisher's point of view, realizing that an army of college professors gave six years' time to analyze thousands upon thousands of words, and that the sum of over $200,000 was invested before a single book came off the press, then the vision and pertinacity which entered into the same, stand out with commendable clearness. The American spirit of enterprise which means to do a better job today than was done yesterday, is manifest here in this important work brought out by the Winston people.

Standards in Elementary Shorthand

By Frances Effinger-Raymond and Elizabeth S. Adams. Cloth, 115 pages. Gregg Publishing Co., New York.

The results of a series of experiments in developing standard tests in elementary shorthand and in applying these tests in their completed form, to a larger number of students in western schools, are reported in this book.

The authors set up as the problem of efficient teaching of shorthand two inseparable elements —the correct writing of the shorthand forms to the stimulus of sound (dictation or reading), and the transcribing of the shorthand outlines into the written English equivalent. Accuracy, achieved at a moderately slow rate of speed—75 to 80 words per minute—should be the result of the first year's work.

With these fundamentals in mind, tests were developed to show comprehensively the results of the teaching, in such a manner that weaknesses of individual students would unmistakably be evident and permit the teacher to apply the remedy of additional instruction and drill wherever needed. Eight tests were finally used to cover the important principles of the Gregg system and to determine the degree of accuracy at stated speeds, and at stated intervals of time.

It is becoming clear to all teachers that tests and testing have little value if simple and usable means are not provided for remedying defects in teaching, and for overcoming individual shortcomings of pupils. Recognition of these facts is evidenced in the present book by recommendations for remedial drill and suggestions for improving the teaching of difficult principles.

Europe and the British Isles

By James Faigrieve, M.A., and Ernest Young, B.Sc. Cloth bound, 479 pages. Published by D. Appleton & Co., New York City.

This is the sixth book in a series of "Human Geography by Grades" by the same authors. It familiarizes the student in Part I with the climatic conditions of the several countries of Europe, and the activities engaged in. The countries that come in for special attention are France, Switzerland, the Balkans, Italy, the Ibernian peninsula, Holland and Belgium, the Rhine country, Russia, and the Scandinavian countries.

Part II after discussing the Latin peoples of Europe comes back to the British Isles. Here it tells of Ireland and the Irish, of Scotland and the Scots, of industrial and metropolitan England, etc., etc.

The maps and illustrations which accompany the text are instructive. They not only picture beautiful cities, but also show something of the life and din of the great industrial centers. Many of the illustrations are made from aeroplane photographs, thus giving bird's eye views of the important centers of population.

Principles of Modern Radio Receiving

By L. Grant Hector. Cloth, octavo, 306 pages. Price, $5. Burton Publishing Co., Buffalo, N. Y.

This book contains the "latest word" on the circuits used in radio receiving apparatus. The fundamental principles of light, sound, and electricity as applied to the subject are rather completely explained, and sufficient mathematics is introduced to make the necessary computations clear. The work will serve excellently the need for supplementary information in school laboratories and electrical departments.

South America

By James Franklin Chamberlain and Arthur Henry Chamberlain. Cloth, 203 pages, illustrated. The Macmillan Co., New York City.

Here is an attractive geographic reader. It deals with the splendors of South America. The fine cities which have been reared in that continent with their mighty architectural creations, the scenic wonders of mountains, rivers, and valleys, are well described in word and picture. The people, their industries, their means of transportation—all come in for consideration.

The authors are frank in saying that they have been able to afford only a small glimpse of a wonderful country. And yet, they have succeeded to provide much interesting material in a small volume.

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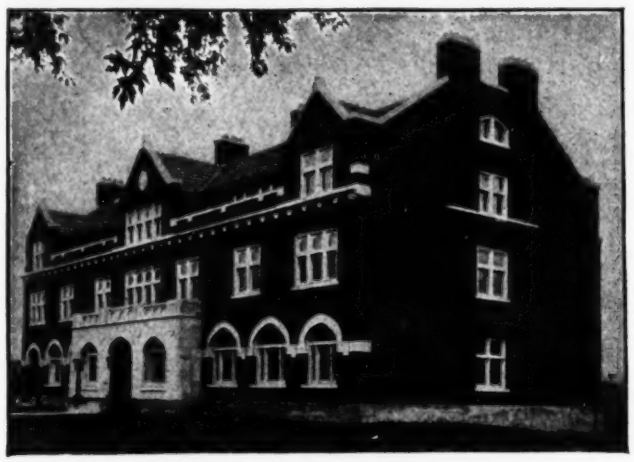

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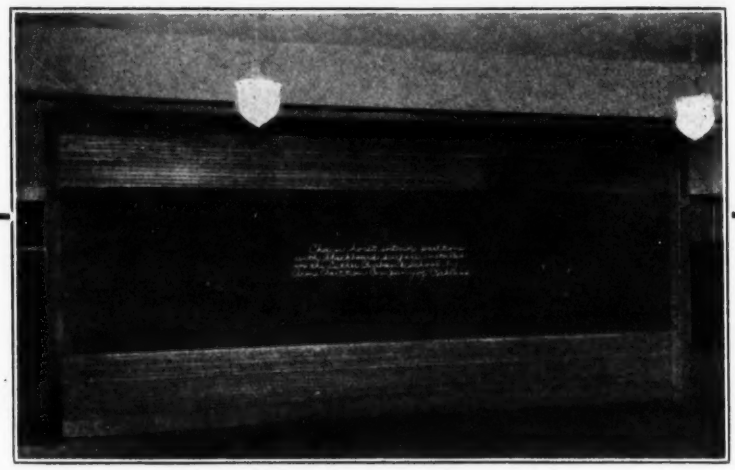

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PUBLICATIONS RECEIVED

The Pathfinder Star Maps. By Edward S. King, of the Harvard Observatory. Published by the Cosmos Press, Inc., Cambridge, Mass. The author, in his preface, points to a need for a knowledge of the change of seasons and of the stars belonging to each, just as is now possible in the case of wild flowers and birds. Such knowledge may be acquired with proper aid.

The present maps, which are twelve in number, are easy guides to the starry heavens, giving the location of the constellations for each month of the year. They are suitable for all portions of the United states, as well as other countries, and have met the test of actual use. The maps show the Ursa Major, the Great Bear, Ursa Minor, and Little Bear stars, the constellations, the first-magnitude stars; and the sixth-magnitude stars. In addition to the 46 constellations listed, portions of several southern constellations are shown.

There is a map for each month, good for any year. Each map is complete in itself, on a separate page, convenient for field use. Ample descriptive matter goes with each map, explaining the use of the map and the features of special interest to be found in the sky for each particular month.

The Organized Summer Camp. By Marie M. Ready. Physical Education Series No. 7, 1926. Price, five cents. Issued by the Bureau of Education, Washington, D. C. The summer camp has proven an excellent means of furnishing interesting and wholesome occupation and also educational work for children. The success of the work has been attributed to the method of organization and management which includes a well-balanced schedule of work and play. The pamphlet describes and illustrates public school camps, boys' and girls' club camps, municipal camps, summer health camps for undernourished and tubercular children, and boy scout camps. There is a good bibliography on the subject.

The Call of the Camps. Six years of the Citizens' Military Training Camps. By G. F. James. Issued by the Military Training Camps Association of the United States. The pamphlet describes the organization, the activities, and the advantages of military training as carried out in the several military training centers.

Chicago Practice Tests for Mastery of Grammar and Usage. By Sophia C. Camenisch. Price, $0.80 per hundred copies. The English Journal, Chicago, Ill. The material is useful for testing pupils in sentence construction, grammar and usage, and general mechanics. Typical tests are given for practice, for check-up, and for diagnostic testing.

Achievement Tests in History, Reading, Spelling, Civics, Language, Drawing, and Arithmetic. Prepared by V. H. Culp, I. D. Weeks, and M. M. Guhin of Northern Teachers' College, Aberdeen, S. D. Issued by the Hub City School Supply Co., Aberdeen, S. D. The first sheet is a test sheet for sixth grade pupils, containing an outine of questions to be answered in the different subjects. The second is similarly arranged and is intended for students in the eighth grade.

The tests as arranged save a great deal of time for both pupil and teacher, are definite, and follow the course of study closely. They are not time tests, but a pupil will be able to finish two subjects between two regular school intermissions.

Jeu D' Antonymes. Published by Bruce, Milwaukee. A game to be played by as many persons as there are cards. The game is competitive and small prizes may be offered in classwork in the nature of a mark to those who have their cards filled first.

Columbia Research Bureau Tests: English, Stevens, Abbott and Wood; **German,** Purin and Wood; **French,** Meras, Roth, and Wood; **Physics,** Farwell and Wood; **Plane Geometry,** Hawkes and Wood; **Spanish,** Callcott and Wood. Published by the World Book Co., Yonkers, N. Y. The tests are intended to offer reliable, valid, and comparable measurements of achievement in the several subjects listed. The material outlines the derivation, the purpose, and scope of the tests, gives a description of the parts of the test and offers directions for administering, scoring, and interpreting the tests. The questions are quite full and complete; they are arranged in the order of difficulty, and are divided into several equivalent forms. The tests are adapted to the whole range of achievement in the first four years in high school and the first three in college classes.

The Selection of School Building Sites. Paper, twelve pages. Issued by the Better Schools League, Inc., Chicago, Ill. The booklet is not intended as a handbook for those about to locate new school sites, but is intended to show what school districts are doing, the need for the work, and the beneficial results following such practices.

Among the topics discussed are a forward-looking policy in site selection, size of the school grounds, and data for determining the site location. A series of plates is presented to show the location of schools and the necessity of adopting a plan of procedure in the selection and placement of school sites.

Trends of School Costs in Ohio. By W. G. Reeder and E. A. Paisley, Contributions to School Administration No. 3, 1926. Issued by the Ohio State University Press, Columbus. The general purpose of the study is to show and to interpret the trends of school costs in Ohio during the 54-year period from 1870 to 1924. The data for the study was taken from the annual reports of the chief state school officials of the state. The study shows that the total expenditures for education in 1924 were more than fifteen times as much as they were in 1870. The increase may be better understood by noting the increase in the cost of each of the various items which make up the total. The items upon which data are available each year are teachers' salaries, buildings and sites, and miscellaneous.

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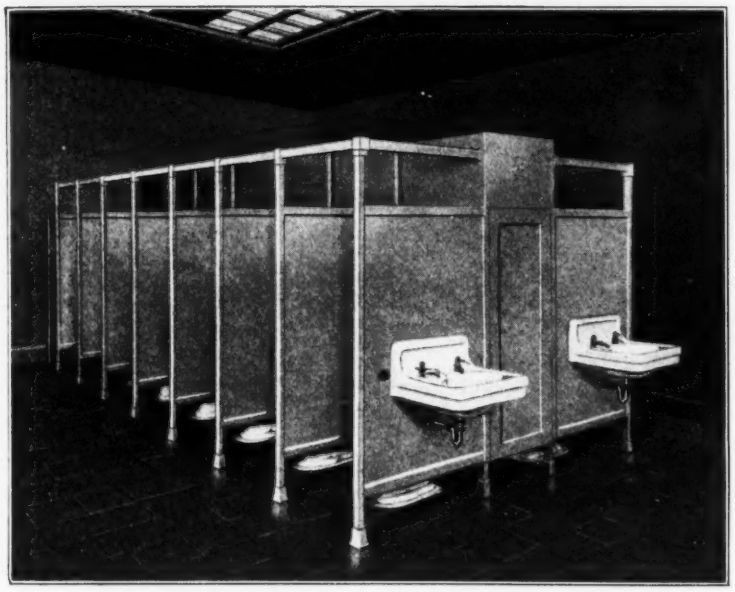

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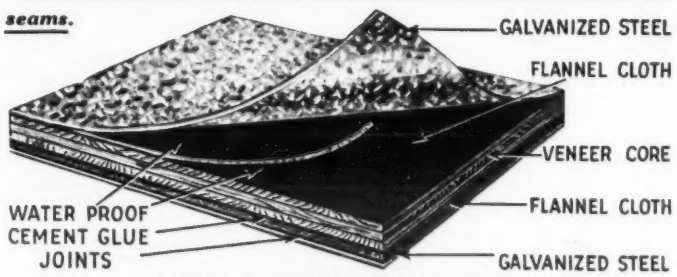

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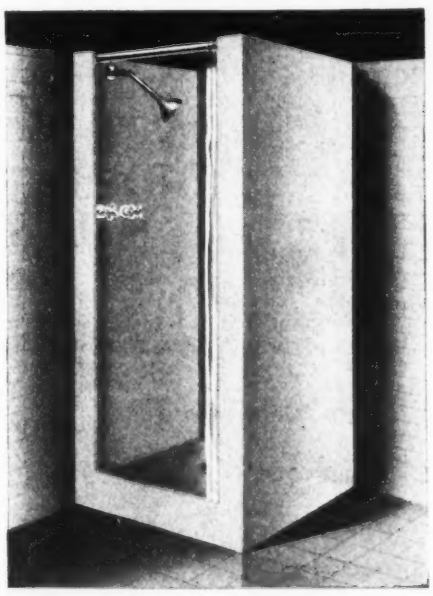

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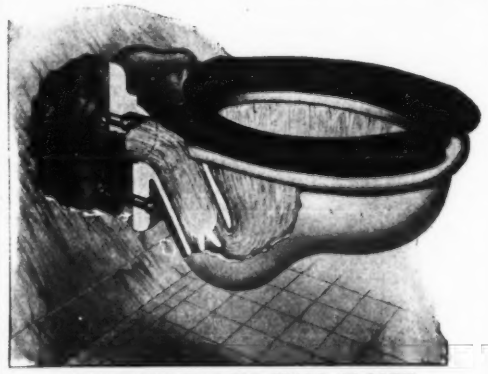

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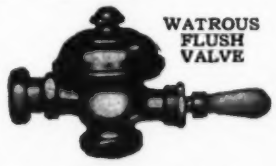

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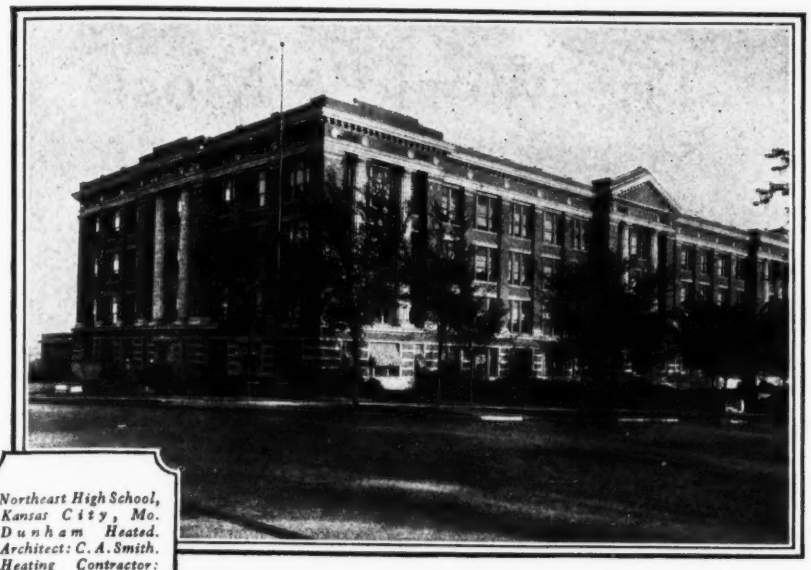

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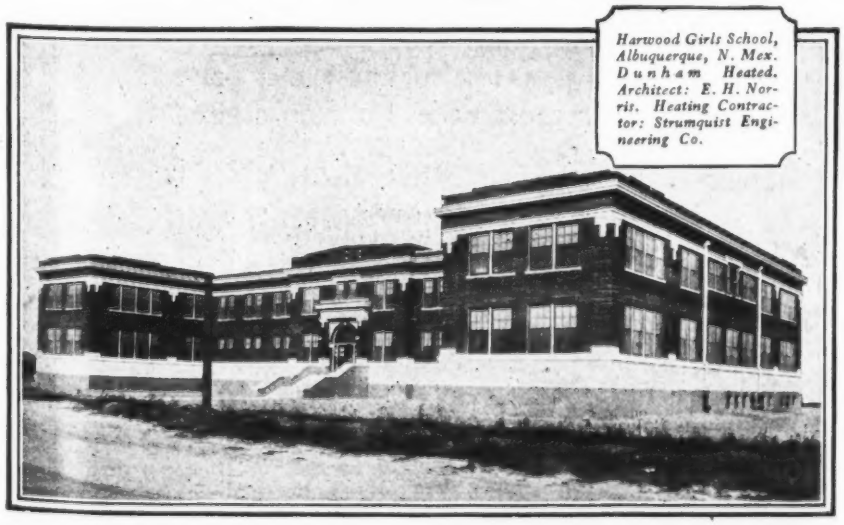

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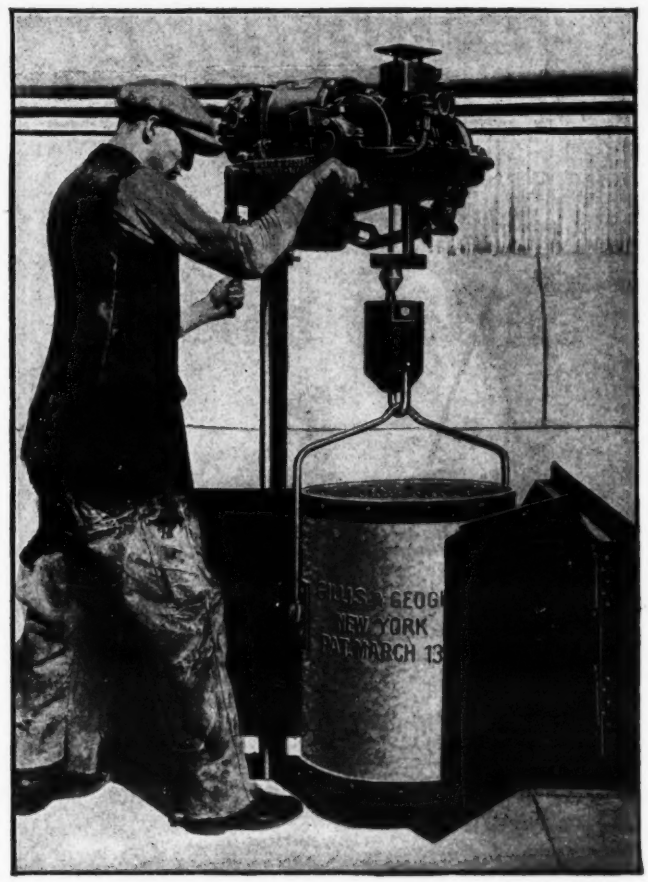

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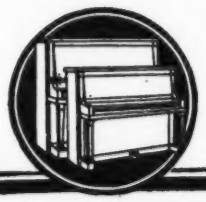

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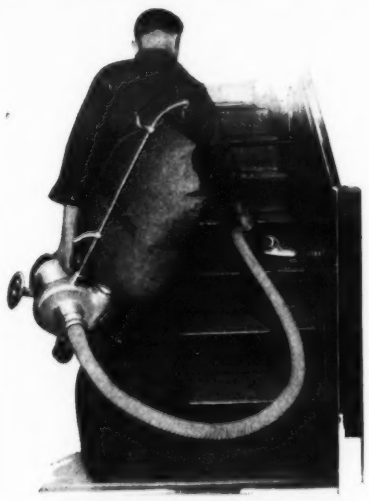

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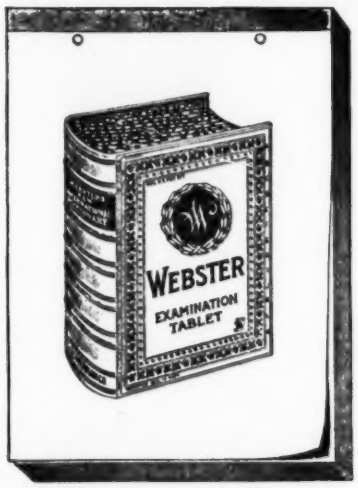

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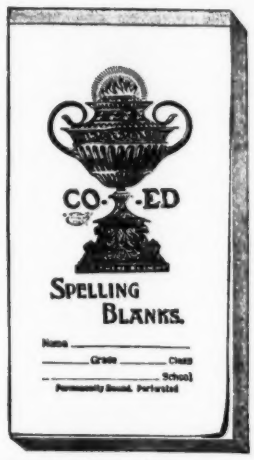

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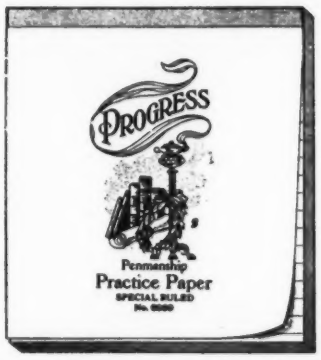
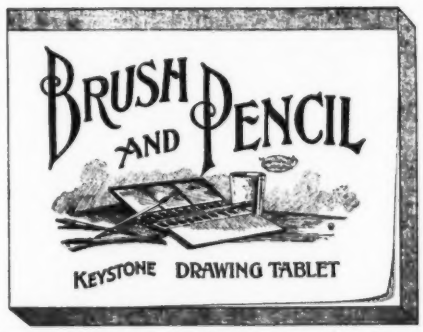


Removable Leaves Ruled Practice



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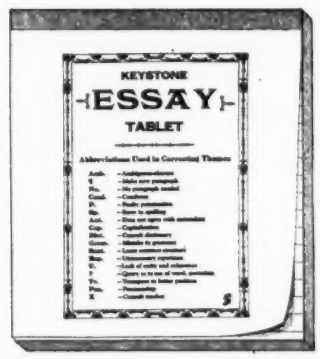

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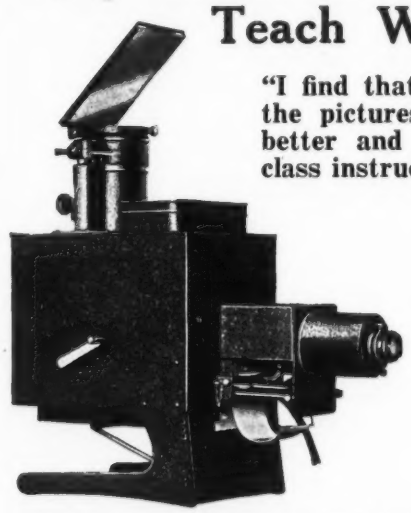

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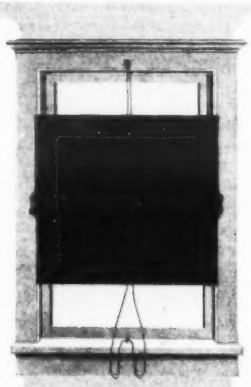

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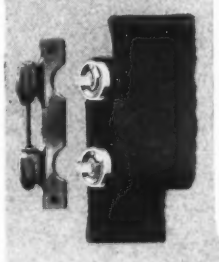

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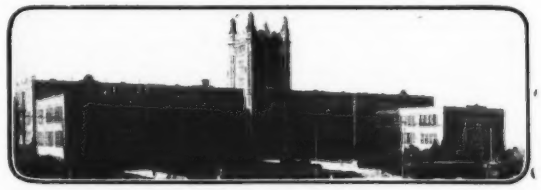

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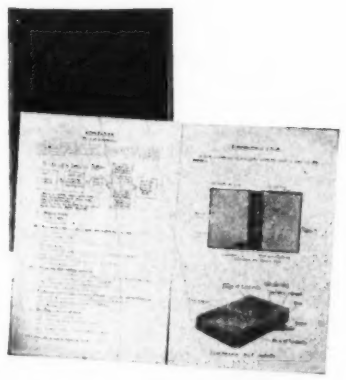

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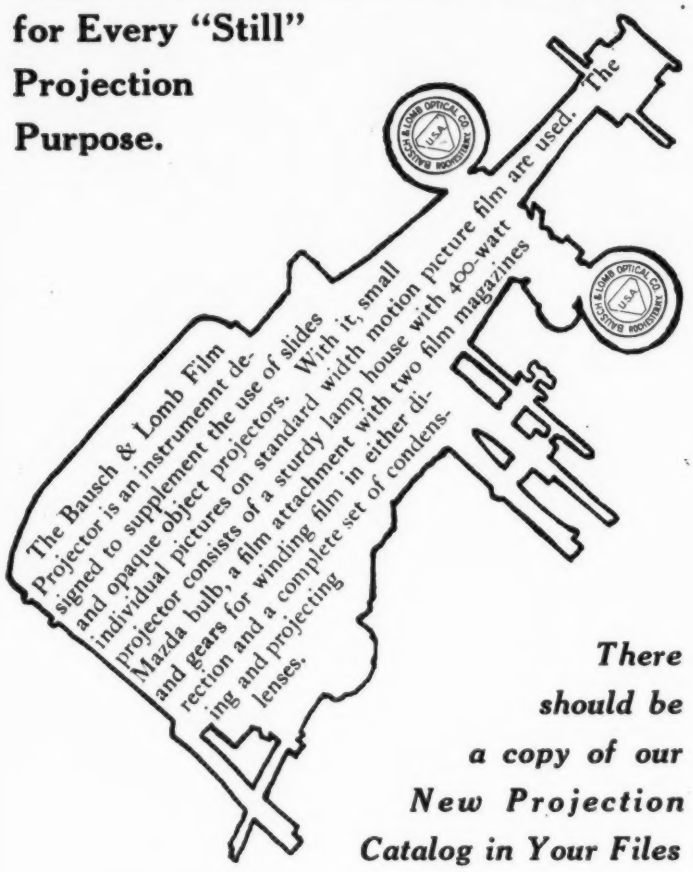
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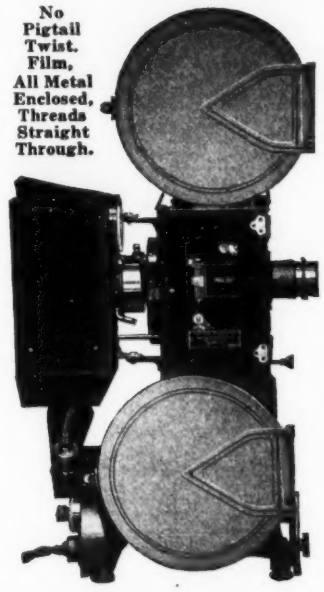

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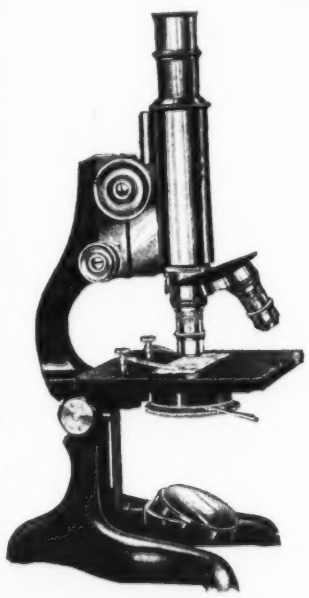

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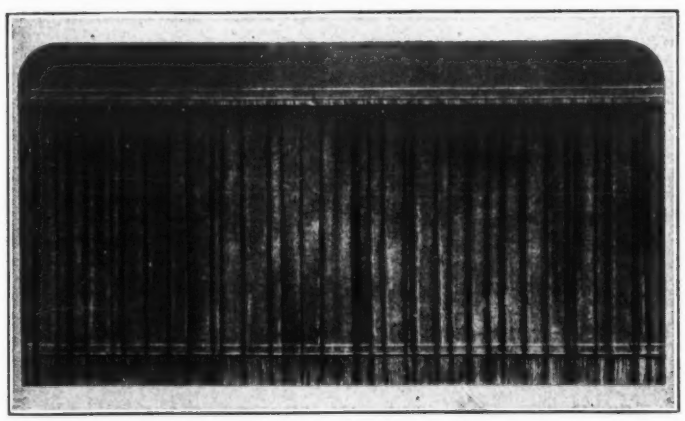

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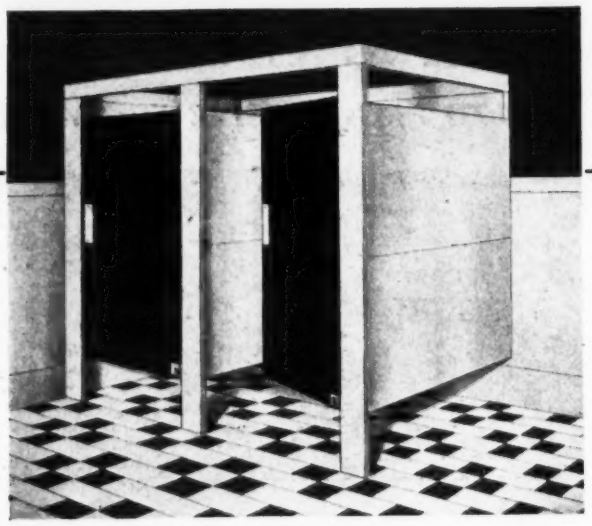

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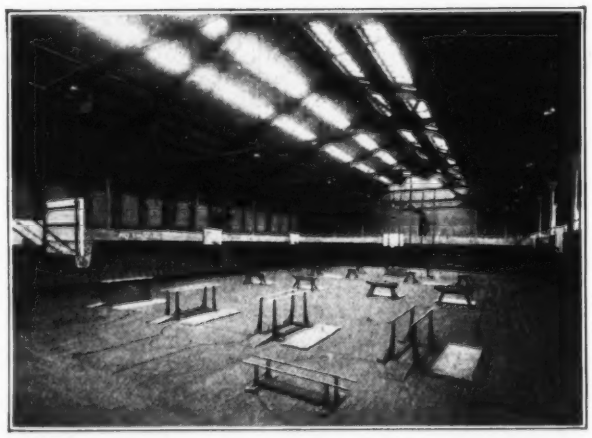

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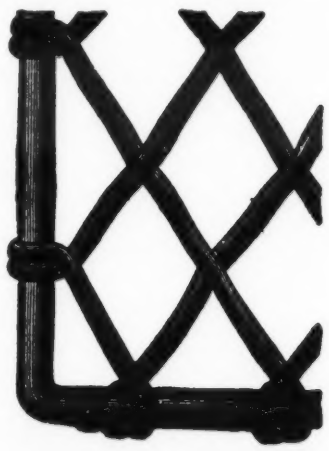

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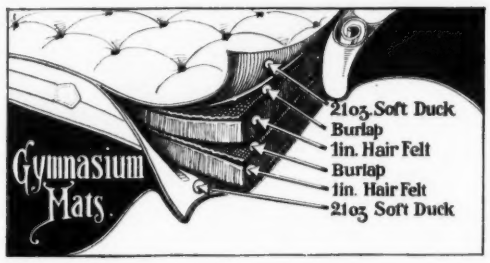

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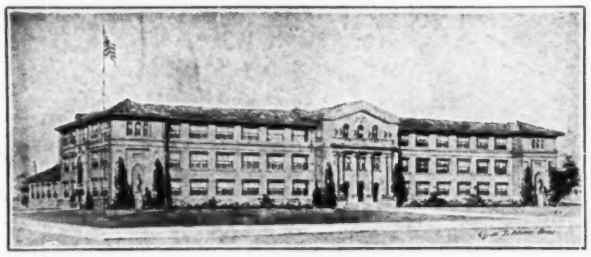

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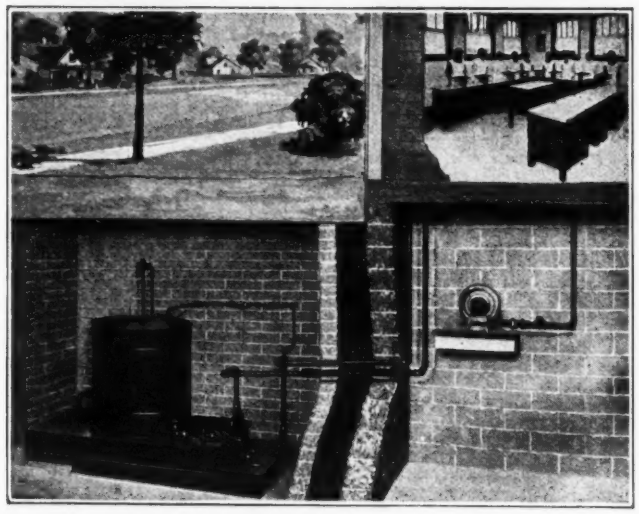

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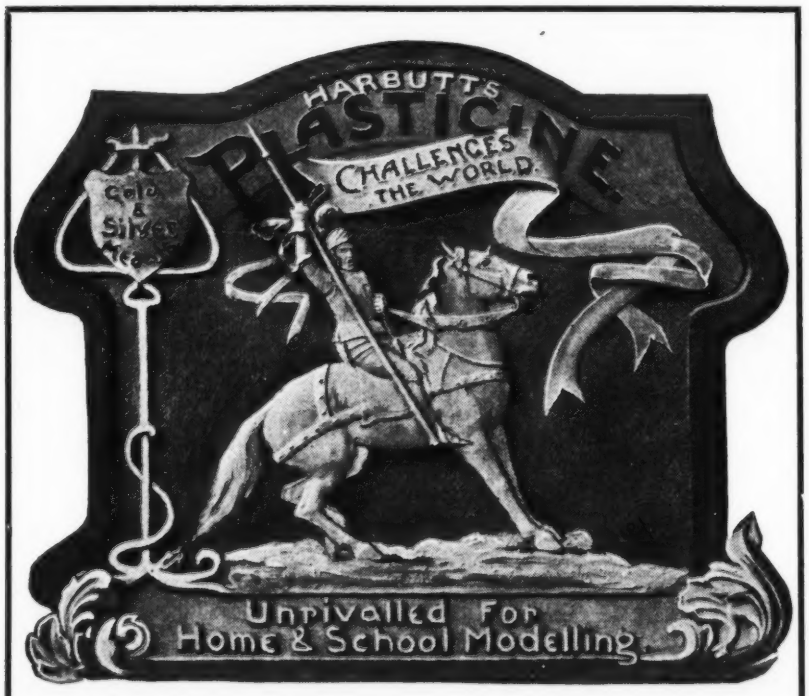

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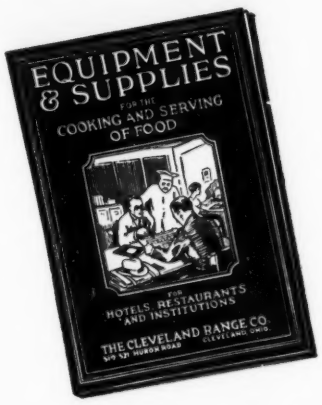

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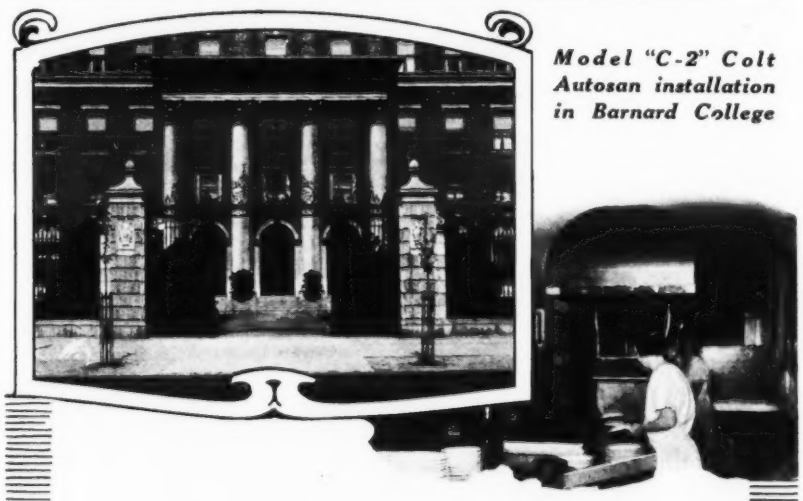

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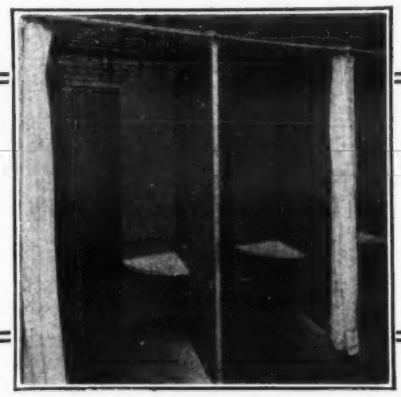

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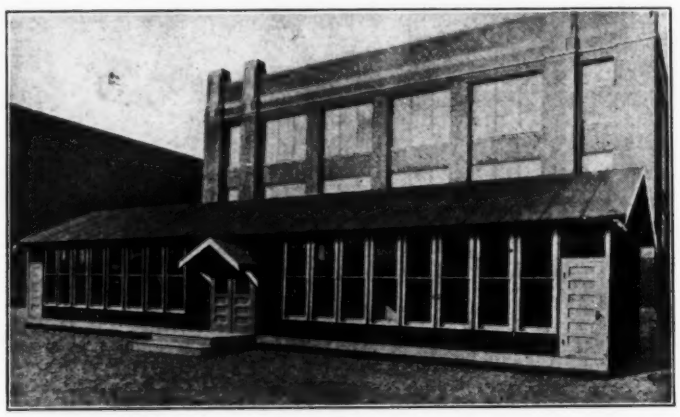

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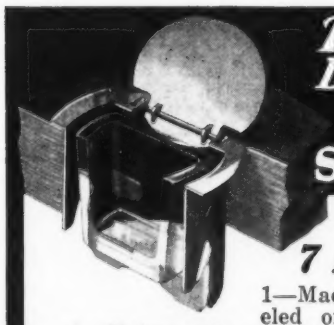

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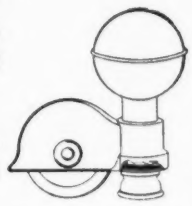

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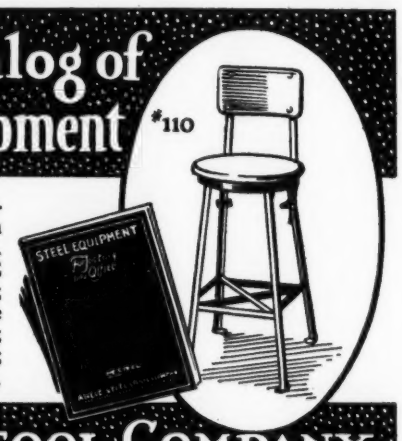

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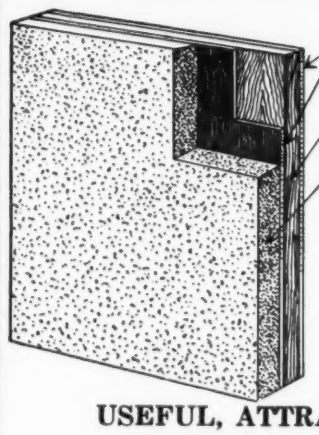

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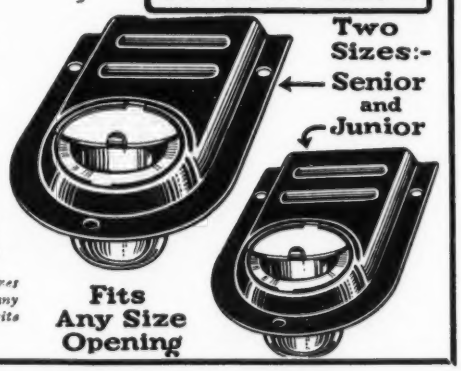

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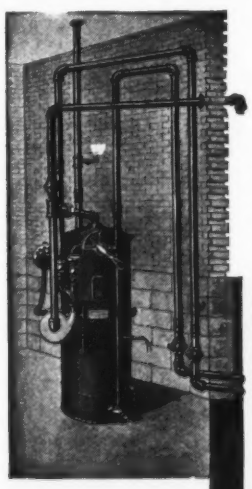

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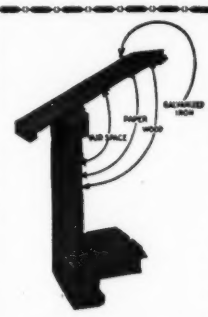

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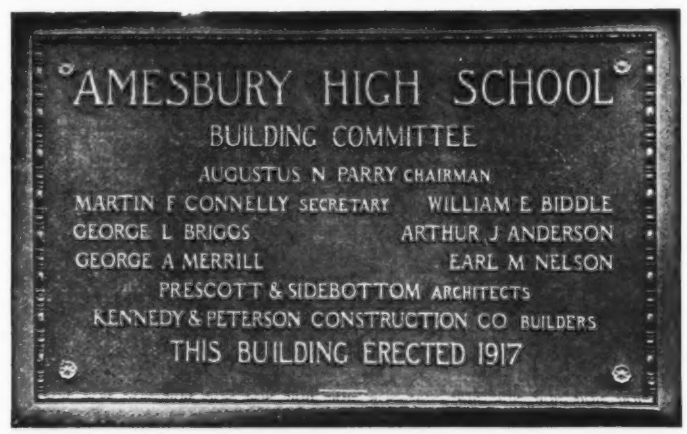

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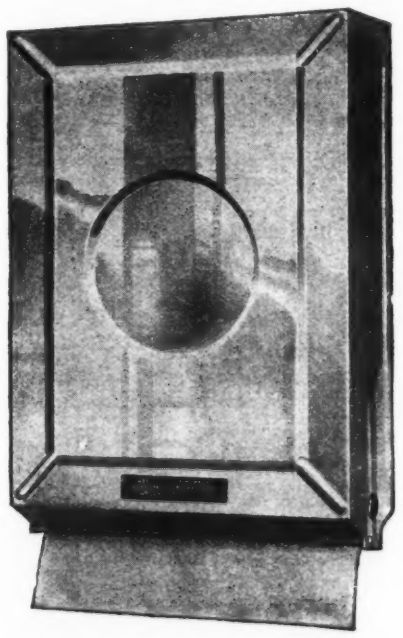

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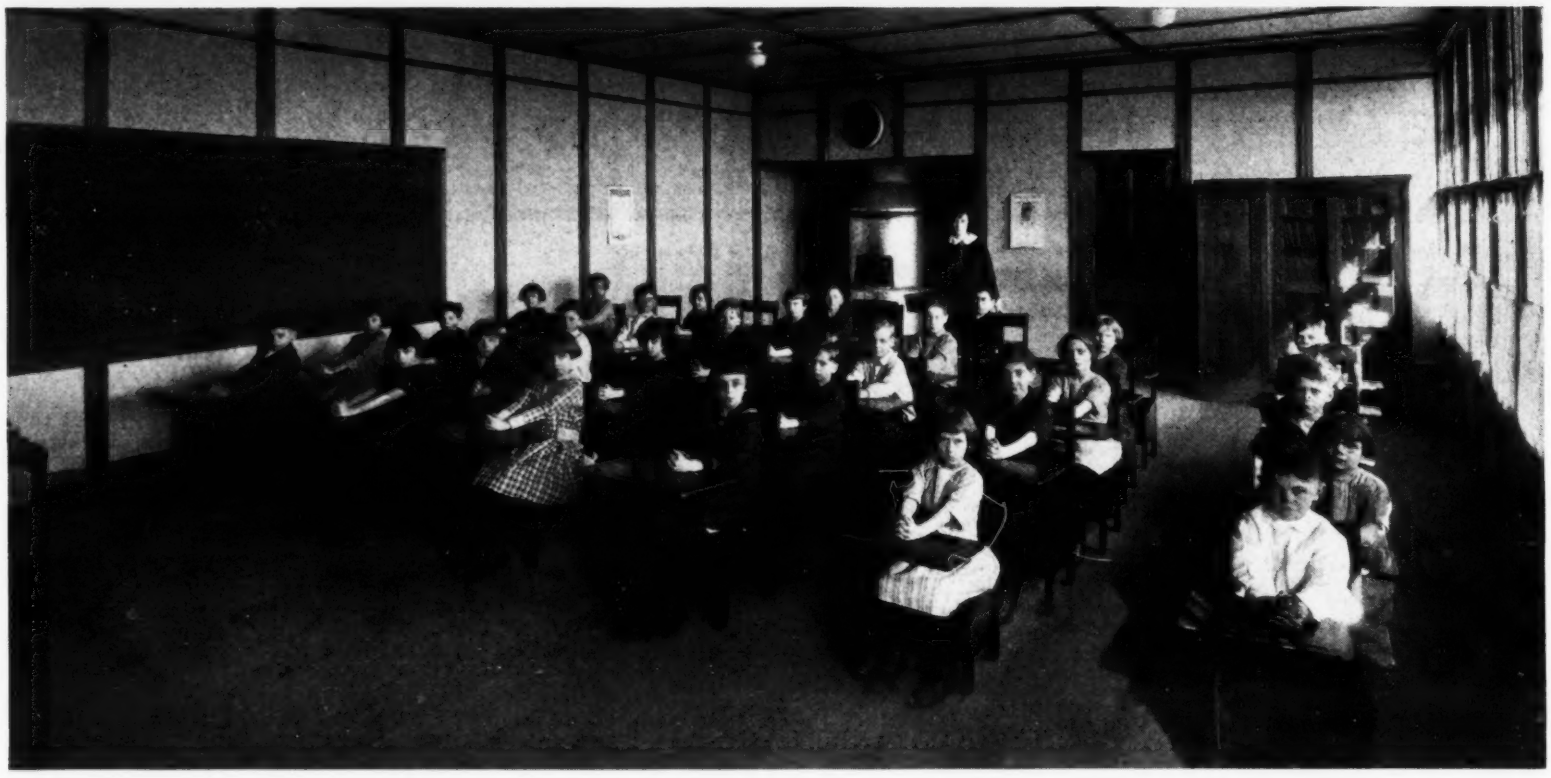

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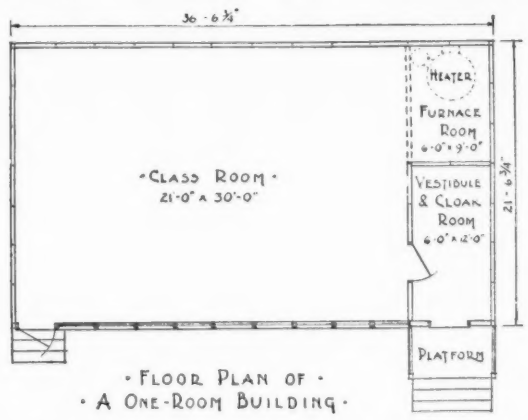

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School Board Journal

DIRECTORY OF EQUIPMENT AND SUPPLIES

The names given below are those of the leading and most reliable Manufacturers, Publishers and Dealers in the United States. None other can receive a place in this Directory. Everything required in or about a schoolhouse may be secured promptly and at the lowest market price by ordering from these Firms.

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Shaw-Walker
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Detroit Steel Products Company
SASH, STEEL
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SASH, VENTILATING
Detroit Steel Products Company
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Continental Scale Works
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Jackson Corp, A. P.
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Most schoolmen have their favorite jokes; most of these jokes illustrate some school point, some a school issue, that is, something that relates to school conditions. In this column for a time, we are going to bring to you the favorite joke or jokes of school officials, and all those folks for that matter, who are interested in schools.

We feel that this type of joke column will be of value to all persons interested in schools. We trust that these jokes will be of help to you in putting sunshine into the daily task, and also in putting across a proposition in your speech that needs the driving force of wit.

WHO IS THE DRIVER?

Recently when Mr. R. G. Jones, Superintendent of the Cleveland schools, was discussing school control and who were really running the schools, he told a story about two men who were returning from a trip up the mountain to a secret still, that did not seem a secret still.

They were riding in a "democrat." This spring wagon swayed and bumped all over the road.

At last Jake said to his fellow-sufferer, "Jack, if you-all cain't drive bettah, I'm goin' to do this heah driving'."

And Jack, in a tear-lined voice replied, "Why, Jake, I thought you-all was drivin' all the time."

LESS NOISE AND MORE LIGHT

The following incident illustrates the way in which Supt. Carroll R. Reed of Bridgeport, Connecticut, cleared the atmosphere in a public meeting which was being held to discuss a school question. The meeting had developed into a lively fight in which people were taking sides and discussing with great vehemence a question which few of them knew anything about. The facts had been much distorted when the Superintendent was asked to speak. He told the following story:

"An old colored man had been attending his lodge meeting in a small town in Virginia, and on his way home, was overtaken by a violent thunder storm. The road was quickly turned into a succession of muddy pools and slippery clay mounds. He would walk a few steps and slip into one of the pools, trying to make his way along in the thick darkness. Whenever a flash of lightning came he could see the road for a few yards ahead. Each flash of lightning would be followed by a reverberant crash of thunder.

"After struggling along for a few hundred yards, the old colored man raised his eyes to Heaven and offered the following fervent prayer: 'Oh Lord, Ah needs your help. But please give us less noise and more light.'"

ENGLISH AS SHE IS SPOKE

Mr. C. A. Weed, Superintendent of Schools, Biddeford, Maine, in emphasizing the difficulties of teaching correct English, released a good story. Here is the way he tells it:

"One of my grade teachers had spent considerable time in teaching the word 'disarrange.' The following day, while some visitors were present, she was testing the class on the meaning of words learned in the lesson of the previous day.

"'Now, who can use the word disarrange in a sentence?' asked the teacher.

"Tony, a little Italian boy, raised his hand.

"'All right, Tony, let us hear your sentence,' said the teacher.

"'My fadder, she make a fire in de stove dis morning and she say "Damma dissa range".'"

SAFETY FIRST

A little poetry now and then livens up even a joke column, so Mr. Charles S. Meek, Superintendent of Schools, Toledo, Ohio, writes us a very good "Safety First" joke as follows:

"Here is a joke that actually occurred. A supervisor was visiting in a building where the assignment for a safety first campaign had been given. This was the limerick reported to illustrate some good point in a safety first campaign:

"He drove his auto on the track
In front of the rushing train;
They put his bones in a sack,
They could not find his brain.'"

NEEDED A CHASER

Mr. J. W. Studebaker, Superintendent of Schools, Des Moines, Iowa, sent to us at our request a very fetching joke with a dash of local color. He follows the joke with a good philosophical paragraph which we are going to quote despite the fact that he may cross us off his list:

"I went into the principal's office in one of our elementary schools one day shortly after the opening of school in the morning and found the principal scolding a little colored lad about 6 years old because he was constantly tardy. Thinking that I would help her out a bit and reenforce her arguments, I looked at the child with wrinkled brow and said in a stern, and I presume a rather gruff voice, 'Young man, when you think you are going to be tardy, why don't you run?' In astonishment he looked at me and very quickly said, 'Ain't nobody to chase me.'

"This suggests that even a little colored boy isn't going to take very readily to these academic school tasks and requiremnets unless there is some reason. What he needed was a motive. We might think that he should like to read and spell and write and figure, but evidently we have been shouting over his head and have not been appealing to anything in his experience. He could see no reason why he should run or get busy unless somebody was chasing him. In some way the teacher will have to find something in the school job that will keep him going."

SERVICES TO THE CAUSE

(According to a report in a contemporary Mr. A. J. Cook, on inspecting the educational system of Moscow, has "introduced a new Bolshevik slogan: 'Children of the world, unite!'")

Children of the world, unite!
  Leave your puffer-trains and rattles
And prepare at once to fight
  In the proletariat's battles.
Gather roses while ye may
  From the comrade's famous movement—
Why, you ought to lead the way
  In this scheme for world improvement!
Every day the younger sort
  Let their useful gifts be wasted;
Rows arise in idle sport,
  Hair is pulled and noses pasted.
Willie, must I speak again?
  Do not tug your sister's tresses—
Keep your powder dry and then
  It shall serve for nobler messes.
Be a little Bolshevik,
  Use your youthful gifts discreetly,
And with tantrum and with trick
  Wear the bourgeois down completely;
Pa's a base capitalist,
  Ma, I think, a Primrose Leaguer—
Theirs the tails you ought to twist
  As a Muscovite intriguer.
You can get them where they live;
  Domiciled within its border
You, my little child, can give
  Socks to any bourgeois order.
To the task, then—do not shrink;
  Seize your parents' tails and twist 'em,
And they'll soon begin to think
  Something's hit their social system.
Use your talents as you should;
  Strive and struggle to encompass
Universal brotherhood
  Via universal rumpus;
Which attractive little scheme
  Represents, my infant Fosco,
Just about the sort of dream
  That they have in mind in Moscow.

—Lucio, in the Manchester Guardian.

The Poor Fish

Mrs. Newpots: "I say, who is that old chap talking to Mrs. Higgs?"

Mrs. Bags: "That's Professor Hogg. A most interesting man—an authority on fish culture."

Mrs. Newpots: "Indeed? I had no idea that fish had any culture—that is, to speak of."

The Old Ones Are Best

Editors sometimes have difficulty in returning manuscripts which for some reason are not acceptable. It is told of an old editor of the American Book Company that he returned a manuscript to a certain lady three times. It came to him a fourth time with a crisp twenty dollar bill attached and a note that the lady was willing to bet that the editor had not read the manuscript.

The day following the would-be author found the manuscript and a check for forty dollars with a memorandum:

"You win."

Hit His Mark

A committee from the legislature was visiting the state university. They were invited to take supper at the students' club, where most of the poor young fellows who had to work their way got board at cost. After supper the students called on the visitors for speeches.

One member from a remote county, who had made his reputation by "bein' a good talker," grew very eloquent in his encouragement to the boys to go on, in spite of all difficulties.

"I know what it is, boys," he said emphatically. "I had to dig for my own education, but I shore got her."—Country Gentleman.

Why Study?

The correspondence school agent was lauding the merits of his courses. "Why not take a course in efficiency training?" said he. "I can show you how to earn more money than you are getting."

"I do that now!" said his victim morosely.

Father: "I see you are at the foot of the spelling class again."

Son: "Yes, sir."

Father: "How come this time?"

Son: "I put too many z's in scissors."

Teacher: "I have went. That's wrong, isn't it?"

Wee Will: "Yes, ma'am."

Teacher: "Why is it wrong?"

Wee Will: "Because you ain't went yet."

Prexy Tells One

Dr. Nicholas Murray Butler, President of Columbia University, told a Scotch story at the recent Ohio Society banquet at the Waldorf.

Speaking of the Ohioans in New York City and their success here, he said it reminded him of the boastful Scotchman who was so successful in London.

"If you think so much of Scotland, why did you ever leave there?" a Londoner asked him.

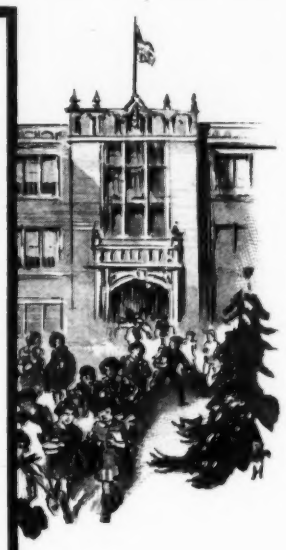
"In Scotland," replied the Scot, "my mentality is considered below the average, but here in London I'm considered a right smart man."

An Alarming Symptom

"I'm worried about my daughter."

"What seems to be the trouble?"

"I don't know; but we bought her a yellow slicker to wear to high school and she hasn't drawn any pictures on it."



This very attractive library in the Fullerton-Wilshire Elementary School, Fullerton, California, is equipped with Library Bureau school library furniture.

Encouraging Reading for Mind Training

ANY authority on child education will tell you that one of the best methods for training the school child's mind, is to encourage reading.

In order to accomplish this, two things must be done. First of all, the selection of the proper course of reading must be considered. Books of a mind broadening nature that will properly fit into the regular curriculum, and not books of fantasy, must be chosen.

Then of course the next thing of utmost importance is the planning of the school library. The surroundings must be planned so as to create an atmosphere of quietness, dignity and inspiration, which will, naturally, induce more conscientious reading.

For fifty years Library Bureau has been an authority on the planning and installing of such school libraries throughout the country. Library Bureau school library furniture is made so as to conform exactly with the school's every requirement. Its beauty of design and sturdiness of construction has made it the choice of the library profession.

Library Bureau school library furniture is designed and made to withstand the strenuous usage of growing boys and girls, and as evidence of this, Library Bureau is able to point to school library equipment which it installed, a generation ago . . . . and which today after over twenty-five years of service is still in excellent condition and rendering splendid service.

By keeping constantly abreast of all library progress, Library Bureau holds the high regard of the library profession. Its experience with the problems of library equipment and library method is cheerfully shared with all who are in library work. Your questions will have prompt attention. Address them to the Library Division, Rand Kardex Service, 118 Federal Street, Boston, Mass., 451 Broadway, New York City, or 214 West Monroe Street, Chicago, Ill. Pacific Coast Distributors, McKee & Wentworth, 759 So. Los Angeles Street, Los Angeles, Calif., 39 Second Street, San Francisco, Calif., or 447 Dexter Horton Building, Third Avenue and Cherry Street, Seattle, Washington.

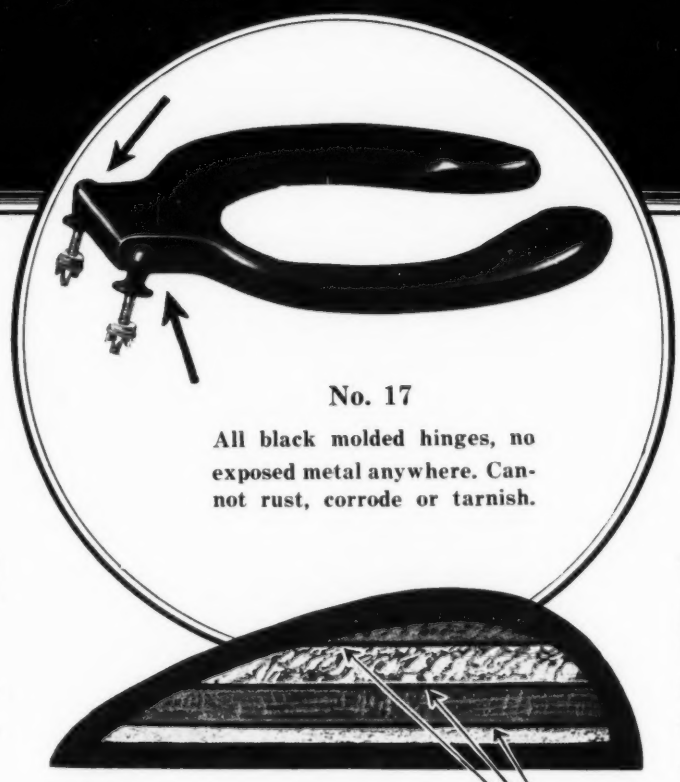
Library Bureau

Division: Rand Kardex Service

451 Broadway, New York

RAND KARDEX · LIBRARY BUREAU · SAFE-CABINET

A toilet seat that is sanitary, indestructible and guaranteed for the life of the school building



No. 17

All black molded hinges, no exposed metal anywhere. Cannot rust, corrode or tarnish.

ARE the toilet seats in your school sanitary and indestructible?

You will never have to replace a Church Sani-Black Toilet Seat.

It is non-absorbent, therefore perfectly sanitary and a safeguard of the children's health.

It is attractive — enhances the appearance of the toilets.

It is indestructible — there is no maintenance cost on the Church Sani-Black Seat. Whether used for replacement or in a new building, the Sani-Black Seat is guaranteed for the life of the building.

The Church Sani-Black Seat is the only seat made that has a laminated wood and rubber core.

The outside covering is a hard composition vulcanized under heat pressure, completely encasing the laminated rubber core.

Brief details of CONSTRUCTION

The core of the Sani-Black Seat is built up with cross-grained layers of wood and sheet rubber, vulcanized under heat and tremendous pressure until a compact and homogeneous core unit is produced. Each ply of wood in the core is surrounded with rubber, which gives a permanent seal to each ply, making it absolutely non-warping.

This gives the seat full protection against moisture, atmospheric or climatic conditions and abuse.

There are no joints anywhere in the seat or covering.

There is no finish to wear off.

This different construction makes the Church Sani-Black Seat sanitary, light, neat and indestructible — makes it possible to unconditionally guarantee it not to break, splinter, chip, craze, crack or wear out.

Made in all styles with and without covers.

We shall be pleased to send any school teacher or superintendent, or any school board member, an actual cross-section of this Sani-Black Seat together with complete information. The coupon below is for your convenience in sending for this information.

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LOOK FOR THIS NAME ON UNDER-SIDE OF SEAT

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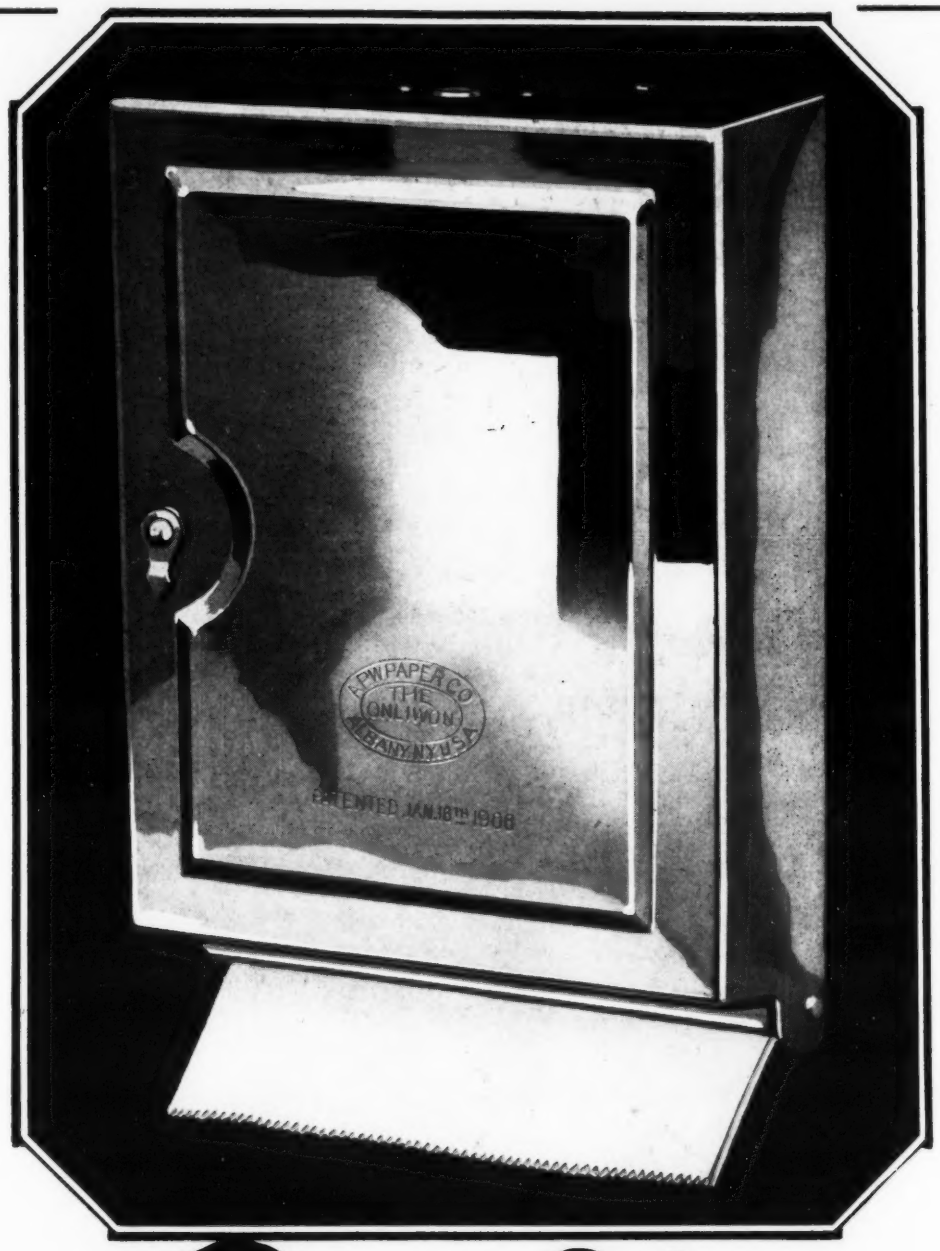

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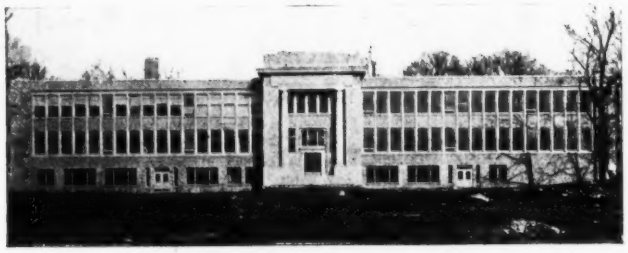
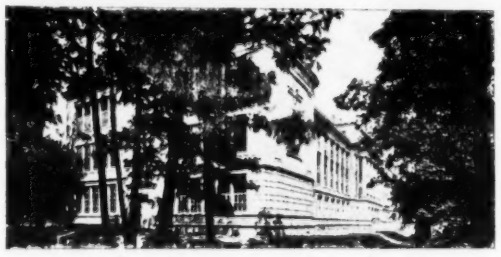


Charles E. Nichols School, Mt. Vernon, N. Y.,
Werner & Greenfield, Architects.



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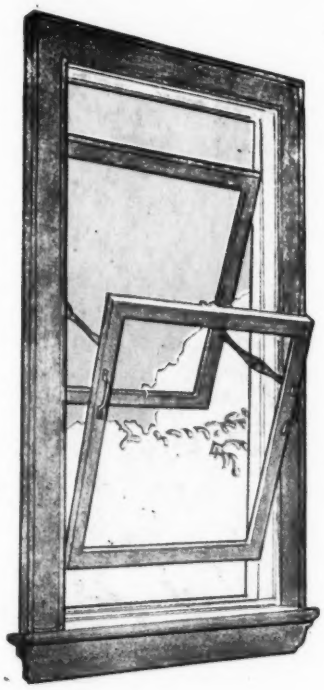
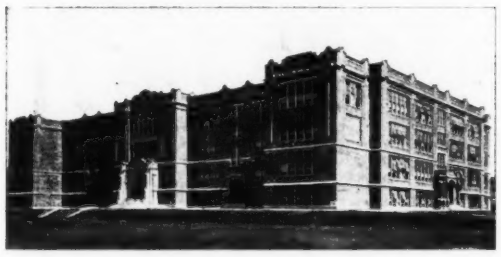
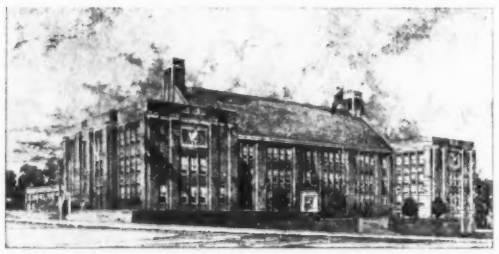
E. A. Arend, Architect.



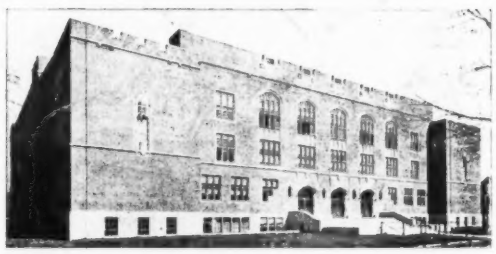


East Side High School, Paterson, N. J.,
Fanning & Shaw, Architects.



Canton School, Baltimore, Md.,
Wyatt and Nolting, Architects.

High School, Mt. Clemens, Mich.,
J. C. Llewellyn, Architect.



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Chas. S. Palmer, Architect.

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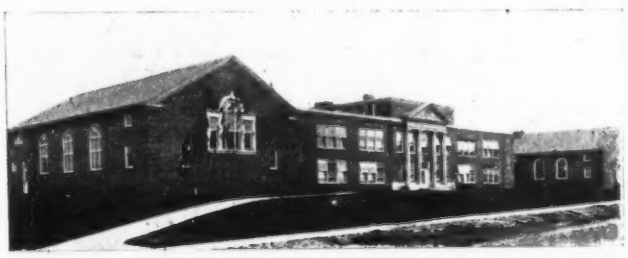
Highland Park School, Highland Park, N. J.,
Alexander Merchant, Architect.



Westbury High School, Westbury, L. I.,
Peabody, Wilson & Brown, Architects.

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